

MENTAL ILLNESS STIGMA, PARENT-CHILD COMMUNICATION, AND HELP SEEKING
OF YOUNG AMERICAN ADULTS WITH IMMIGRANT PARENTS

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This study examined a mediational model of mental illness stigma, parent-child communication about mental health concerns, and help seeking attitudes/behaviors among young adults with at least one immigrant parent while considering the possible moderating effect of acculturation gap. The primary goal of this study was to examine whether the acculturation gap changed the relation between mental illness stigma and communication about personal mental health concerns with immigrant parents, which in turn could become a significant predictor of their help-seeking attitudes, as well as a barrier to seeking professional mental health services. Findings provided support to the direct and indirect effects of mental illness stigma through communication about mental health concerns on attitudes about help-seeking. The acculturation gap hypothesized to be a possible moderator for the stigma-communication about mental health concerns relationship among young adult ABCI was found to be significant for ABCI with a low mainstream culture acculturation gap. Discussion on the findings, limitations of the study, future research directions, and counseling implications are addressed.

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CHAPTER 1

INTRODUCTION

There are many challenges faced by immigrant families in the United States, and one of them is for immigrant parents to raise American-born children in a host culture that is distinctly different from their own. Research with immigrant families has consistently shown that an “acculturation gap” often emerges as a result of the American-born children adjusting at a faster rate to the host/mainstream culture than their immigrant parents (Bajwa, 2010). The acculturation gap has been shown to be associated with increased parent-child conflicts in immigrant families over a wide range of topics, including stigma regarding mental illness and communication difficulties (Costigan & Dokis, 2006; Rhee, Chang, & Rhee, 2003). Approximately 25 percent of the nation’s children have at least one foreign born parent (Migration Policy Institute, 2015) yet inadequate research attention has been paid to exploring the long-term impacts of the acculturation gap on the psychosocial functioning of adult children growing up in immigrant families. To expand the current literature, the proposed study will examine a mediational model of stigma regarding mental illness, parent-child communication about mental health concerns, and help seeking attitudes/behaviors among young adults from immigrant families while considering the possible moderating effect of acculturation gap.

Many studies have documented high levels of stigma related to mental illness and experts have widely recognized it as a significant barrier to help seeking (Eisenberg, Downs, Golberstein, & Zivin, 2009). Despite the availability of evidence-based treatment, research suggests that between 52-74% of people with mental disorders do not receive treatment (Clement et al., 2015), and many who do receive services often delay seeking professional help or do not adhere to recommended treatment (Eisenberg et al., 2009).

It has been well documented that immigrants and American-born children of immigrants (ABCI) often report more stigma associated with mental illness compared to their White American peers (Abdullah & Brown, 2011; Eisenberg et al., 2009). In fact, researchers often cite this stigma as an important contributor to the underutilization of mental health services by individuals from immigrant families (Abdullah & Brown, 2011; Eisenberg et al., 2009).

An individual with greater stigma about mental health concerns may be more likely to avoid communicating about their mental health issues with significant others as a method of self-protection from negative emotions (e.g., shame, embarrassment, guilt, etc.) (Link & Phelan, 2001). Unfortunately, this lack of communication about mental health concerns may serve to perpetuate negative expectations and personal stigma, which in turn may result in negative attitudes and action in seeking professional mental health services when needed (Abdullah & Brown, 2011). Thus, there is conceptual support for a mediational model among stigma, communication about mental health concerns, and help seeking attitudes/behaviors. Although the prevalence of mental disorders is mostly similar across racial and ethnic groups, it is important to note that there is considerable variation *across* racial and ethnic groups in treatment rates (Corrigan, Druss, & Perlick, 2014). Given that stigma is a social construct, it is not surprising that it is heavily influenced by an individual's social context, which may include their family, culture, and ethnicity (Corrigan et al., 2014). In a review of the relevant literature, Abdullah and Brown (2011) found that specific cultural beliefs do indeed influence mental illness stigma, which often results in a lower likelihood of seeking mental health services when in need. Importantly though, they also found that the relationship between stigma and culture is extremely complex and that significant variation can be found within a culture.

Therefore, in order to fully understand the implications of ABCI's personal stigma and communication about mental health concerns with their immigrant parent(s), one must also consider the possible impacts of the existing acculturation gap. Research has indicated that ABCI's who perceive their parents to be less mainstream culture (MC) acculturated are less likely to communicate mental health concerns with their parents for similar reasons noted above (fear of rejection, embarrassment, disappointment, etc.) (Corrigan, 2004). Following this logic, it may be that the effect of personal stigma on communication depends on this particular manifestation of the acculturation gap (ABCI's perception of parent(s) acculturation and beliefs on mental illness). That is, the overall magnitude of personal stigma's indirect effect via communication on help seeking behaviors and attitudes ultimately depends on ABCI's perception of their immigrant parent(s) level of MC acculturation and beliefs around mental illness. By considering this aspect of the family context, we can potentially uncover nuanced aspects of how the shared (or lack of shared) cultural values and norms at home while growing up may have played a role in how personal stigma influences the communication of mental health concerns for ABCI, which then eventually results in lowering or encouraging their help seeking behaviors.

CHAPTER 2

REVIEW OF THE LITERATURE

The current study examined a moderated mediation model (see Figure 1). The mediational part of the model was identified by both existing literature and conceptual reasoning outlined in previous sections. Specifically, personal stigma held by ABCI young adults was hypothesized to have both direct and indirect effects (through communication about mental health concerns) on their attitudes and behaviors in seeking professional mental health services. In addition, it was hypothesized that the acculturation gap between ABCI and their immigrant parents (as perceived by ABCI) would be a significant moderator for the stigma-communication path in that the perception of a small acculturation gap was expected to buffer the negative effect of stigma on communication whereas a large acculturation gap was expected to exacerbate the magnitude of this relation.

Mental Illness Stigma

According to the Surgeon General's report on mental health (U.S. Department of Health & Human Services [USDHHS], 1999; Abdullah & Brown, 2011), mental illness stigma is "the most formidable obstacle to future progress in the arena of mental illness and health" (p. 3). Goffman (1963), a well-known scientist in the field of stigma, broadly defined it as an attribute that is deeply discrediting and that makes the person different from others and of a less desirable kind, and motivates efforts by the stigmatized individual to hide the mark when possible. Though mental illness stigma is often cited and discussed in the literature as a broad construct, it is a complex process that may be manifested in several different ways, the following discussion will

focus on a couple of the distinct forms it often takes, including perceived public stigma and self-stigma.

Corrigan (2004) posits that public stigma refers to the negative stereotypes and prejudice about mental illness held collectively by people in a community or society. An individual's perception of the general public's discriminatory response to people with mental illnesses is referred to as *perceived public stigma* (Corrigan, 2004). *Self-stigma* is a construct that is directly influenced by perceived public stigma and refers to the negative attitudes people have about themselves as a result of internalizing stigmatizing ideas held by society. Self-stigma has been noted to have a wide range of negative consequences to an individual's overall well-being and sense of self (Corrigan, 2004). Furthermore, researchers note that individuals may conceal or even not acknowledge the mental health concerns of family members in order to avoid "stigma by association" (Biernat & Dovidio, 2000, p. 103; Phelan, Bromet, & Link, 1998).

It is well-documented that self-stigma, the internalization of public stigma regarding mental illness (Corrigan, 2004), is often accompanied by negative emotional reactions including, shame, low self-esteem, and diminished self-efficacy (Corrigan, 2016), all of which may exacerbate mental health problems. Furthermore, self-stigma may also result in an individual having negative expectations about one's interactions with others (Abdullah & Brown, 2011), which has been shown to increase the likelihood of defensive and self-sabotaging behaviors, such as the avoidance of seeking professional help. Research has also suggested that the often "concealable" or "invisible" nature of mental illness may allow individuals to decide to avoid this label by hiding their "stigma" by either not talking to anyone about it or opting to avoid the stigma all together by denying their group status and by not seeking professional mental health care which may "mark" them (Corrigan & Matthews, 2003; Corrigan, 2004). Moreover, besides

being a barrier to help-seeking, concealing a mental health concern in order to avoid stigmatization can impede the development and maintenance of social relationships, insofar as self-disclosure is thought to be an important element of meaningful relationships (Derlega & Berg, 1987; Smart & Wegner, 2000). All of this may yet be further compounded by perceived cultural differences between American-born children and their immigrant parents as they attempt to navigate the social norms, standards, and values of their heritage and host cultures.

Stigma and Help-Seeking Attitudes and Behavior

Many studies have found empirical support for the relation between stigma and help-seeking attitudes/behaviors in that individuals with stigma of mental illness are typically less likely to seek or use mental health services (Kessler et al., 2001). Research also suggests that stigma may be a reason for the underutilization of available mental health services among cultural and ethnic minorities in the United States (Wang et al., 2005). They have been consistently found to either delay seeking treatment until a condition is chronic and be more reluctant to using mental health services compared to their White American peers (USDHHS, 2001). Despite the heterogeneity between and within Asian, Latino, and Middle Eastern cultures, Abdullah and Brown (2011) posit that these cultures share common values of collectivism, interdependence, conformity to norms, cooperation, and family recognition through achievement. It is not surprising then that mental illness, a deviation from the conformity to norms, would be more stigmatized among these groups. For instance, mental illness stigma in Asian cultures may be in part attributed to common cultural beliefs that mental health problems are a result of weak character, having evil spirits, or punishment for not respecting ancestors (Abdullah & Brown, 2011; Lam, Tsang, Chan, & Corrigan, 2006). Moreover, given the value of

collectivism in many immigrant families in the United States, a mental illness may also be seen as a reflection on a person's family and can bring the family shame (USDHHS, 2001; Lauber & Rossler, 2007).

Seeking professional help for mental health concerns is also stigmatized and often discouraged by one's family because it may be seen as a sign of weakness, lack of self-discipline, and/or will reveal problems that will shame the family (Fogel & Ford, 2005). Thus, when experiencing mental health issues ABCI may also feel that they are disappointing their parents and failing to live up to parents' expectations (Costigan & Dokis, 2006). Corrigan (2004) has suggested that stigma may be a particularly salient barrier in seeking mental health care for ABCI because of such discrepancies between the collectivist cultural values of their family of origin and the mainstream American values of individualism and autonomy. As noted by Abdullah and Brown (2011, p. 937), "...stigma is inextricably bound to culture because the behaviors and beliefs we value and the standards we favor are based on norms that are influenced by culture."

In the only systematic review to examine the existing literature on the impact of mental health-related stigma on help-seeking (Clement et al., 2015), researchers found that stigma disproportionately deterred some ethnic minority groups, including Arab Americans and Asian Americans, from seeking professional mental health services for mental health problems. Their results also indicated that the most prominent type of stigma barriers were disclosure and confidentiality concerns and the largest barriers to seeking help were wanting to handle the problem on one's own, followed by low perceived need for care. These findings highlight two important variables relevant to the current study, communication about mental health concerns and cultural differences in the perception of mental illness and need for professional services.

In a large study conducted to examine the association of help-seeking behavior with both perceived public stigma and personal stigma, 5,555 student participants were surveyed from a diverse set of 13 universities (Eisenberg et al., 2009). The results indicated that personal stigma was significantly and negatively associated with measures of help seeking and that personal stigma was higher among students with any of the following characteristics: male, younger, more religious, international, or Asian (Eisenberg et al., 2009). With regard to sociodemographic correlates of help-seeking attitudes and behaviors, the findings of this study were generally consistent with those of previous studies that have found that Asians and Latinos generally report more negative attitudes about mental health treatment than other groups (Shea & Yeh, 2008; Zhang & Dixon, 2003) and that international students from diverse backgrounds have generally higher personal stigma (Abe-Kim et al., 2007). Eisenberg et al. (2009) underscore the importance of context in their findings, such that awareness of public stigma may be less likely to impede help seeking if, for instance, people are confident that their treatment will remain confidential. Also, students seem to be less concerned about the attitudes of “most people” than the attitudes of their close friends and family.

Fogel and Ford (2005) conducted a study to examine the beliefs of Asian Americans with depression about stigma associated with treatment among friends, employers, and family. By using an online survey, the researchers were able to ensure anonymity while measuring stigma to allow the participants to feel more comfortable. They asked participants to indicate their agreement with statements that assessed if they would feel embarrassed if their friends knew they were receiving professional mental health care, and if their families would be disappointed in them if they had depression. The findings were consistent with the literature, suggesting that Asian Americans report greater stigma associated with mental disorders than their White

counterparts. A particularly interesting finding of this study was that stigma related to family was significantly higher for Asian Americans under the age of 16 compared to their White peers.

Fogel and Ford (2005) suggest this finding may be explained by their awareness of the traditional beliefs about mental illness perceived by their parents and other family members; it is possible that when Asian American adolescents discuss mental health topics with their family, the result is often a denial of mental health difficulty and/or criticism.

In a study conducted by Miville and Constantine (2007), the perceptions of public stigma as a mediator of the relation between adherence to Asian cultural values and intent to seek counseling among 201 Asian American college women was examined. They found that Asian cultural values and stigma were positively correlated; that is, more Asian cultural values were associated with greater counseling stigma. Also, Asian cultural values and stigma were negatively correlated with intent to seek counseling. In conclusion, their findings indicated that greater endorsement of Asian cultural values was associated with increased stigma, which in turn was believed to have negatively influenced intent to seek counseling. A limitation of the study was that the researchers only included Asian American college women in their sample, so generalizability is limited.

Shea and Yeh (2008) conducted a similar study when they investigated how adherence to Asian values, stigma of receiving psychological help, and relational-interdependent self-construal predicted attitudes toward seeking professional psychological help among 219 Asian American university students. Their findings showed an inverse relation between adherence to Asian cultural values and attitudes toward seeking professional psychological help. Results also showed that Asian American students with a higher level of perceived stigma for receiving psychological help tended to endorse negative help-seeking attitudes. These results are consistent

with previous studies that suggest Asian American students may find seeking professional psychological help contradictory to their belief system due to significant differences between the Asian and Western perspectives of self and conceptions of psychological problems (Shea & Yeh, 2008). The cultural values historically emphasized in many Asian families encourage individuals to withhold strong emotions, exercise restraint to avoid embarrassment and shame in public, preserve social harmony by conforming to family and social norms by not focusing on personal issues, and to accept and endure problems (Yeh, 2000). Seemingly inconsistent with the results of Miville and Constantine's (2007) study, the findings did not support stigma as a mediator of the relation between Asian cultural values and negative help seeking attitudes. Shea and Yeh (2008) concluded that though traditional Asian values may contribute to negative help seeking attitudes, it is not through stigma.

Soheilian and Inman (2009) examined self-stigma, public stigma, and attitudes toward seeking counseling among 102 Middle Eastern American college students. They found a significant and negative association between self-stigma and attitudes toward counseling. The importance of maintaining the family image is cited as an important cultural value among Middle Easterners and may help explain the relationship between self-stigma and negative attitudes toward counseling. Again, in order to understand the implications of mental illness stigma on help-seeking attitudes and behaviors, one must consider its interaction within the cultural context from which it develops.

Overall, research findings appear to consistently conclude that mental illness stigma has a clear deterrent effect on help-seeking for mental health problems (Clement et al., 2015). The available literature also provides evidence that ABCI, when compared to their White American counterparts, experience higher levels of mental illness stigma and are less likely to seek

professional mental health services if/when they are needed (Cheon & Chiao, 2012).

Furthermore, there is evidence to suggest that this stigma may impact ABCI's willingness to communicate their mental health concerns to their parents, especially if they perceive their immigrant parent(s) to have a stigmatized or negative view of mental illness and help seeking (Corrigan, 2004; Corrigan & Miller, 2004; Leaf, Bruce, Tischler, & Holzer, 1987; Rhee, Chang, & Rhee, 2003). In general, however, research with immigrant families that explains this relation beyond 'cultural variation' is limited and inconclusive.

Parent-Child Communication as a Mediator of Stigma and Help-Seeking

Barnes and Olson (1985) conceptualize communication as one of the most important and major dimensions to understanding family life. Research has consistently found that open and positive communication can help family members strike a balance between separateness from and connectedness to each other, while a lack of communication skills or negative communication has been found to inhibit the family cohesion (the emotional bonding between family members), adaptability (the ability of the family system to reorganize in response to situational and developmental stresses), and satisfaction (Barnes & Olson, 1985; Grotevant & Cooper, 1985).

It is well established in the literature that parent-adolescent communication is related to various adolescent adjustment outcomes (Barnes & Olson, 1985; Hartos & Power, 2000). For example, researchers have found that parent-adolescent communication is significantly and positively related to adolescents' academic achievement, self-esteem, and mental health (Hartos & Power, 2000). Findings from a study conducted by Hartos and Power (2000) to assess if and how parent and adolescent reports of parent-adolescent communication are related to parent and

adolescent reports of adolescent problem behaviors revealed a significant relationship existed between adolescent and mother reports of more anxious/depressed behaviors and lower quality of communication. The authors suggested many potential factors that may have contributed to this unbalanced reporting between mothers' and adolescents' view of communication and adolescent symptoms such as, maternal insensitivity, neglect, or denial; adolescent confusion about feelings; attempts to mask their true feelings from their mother; or a combination of these possible factors. Though the authors did not investigate possible differences in the patterns of findings across ethnic groups in the sample or communication specifically about mental health concerns, such findings highlight the importance of future research that examines the implications of mental illness stigma on ABCI's perception of communication quality and willingness to disclose mental health concerns with their immigrant parents on help-seeking attitudes and behaviors.

It is also important to consider ABCI's communication specifically about mental health concerns with their parents because family communication patterns often reflect belief systems and create cognitive schemas (Koerner & Fitzpatrick, 2002). The Western emphasis on autonomy is not universal and ethnic and cultural differences in *perceptions* of filial obligations shape parent-child ties (Hay et al., 2007). Such perceptions will likely play a role in whether or not ABCI communicate certain concerns to their immigrant parents. So, we can expect that ABCI who endorse more self-stigma or perceive their parents to have negative beliefs about mental illness and/or professional help seeking will communicate less about their mental health concerns, and this in turn may predict or help explain more negative help-seeking attitudes and behaviors.

Rhee, Chang, and Rhee (2003) conducted a study in which they examined the relations among openness in communication with parents, peer interaction, and self-esteem in two ethnic groups - Asian and Caucasian American adolescents who grew up in the same neighborhood. Their findings provided evidence of significant differences in self-esteem, behavioral patterns, and openness in communicating with parents between Asian and Caucasian American youth. They found that openness in communication with parents was a significant predictor of self-esteem for both Asian and Caucasian American youth and that self-esteem was significantly lower among the Asian American adolescents. Moreover, compared to their Caucasian counterparts, the Asian American adolescents expressed significantly more difficulty in discussing their problems with their parents, particularly with their fathers, indicating they often employ caution about what they say and in expressing their beliefs to their parents.

Rhee et al.'s study corroborates the findings of Yeh and Inose (2002) who surveyed a sample of 274 Japanese, Chinese, and Korean adolescent immigrants in order to better understand cultural adjustment difficulties and coping strategies. They found that communication difficulties were the most common problem reported across all three groups. Since it is usually the case that before seeking professional mental health services, adolescents who live with their parents must first communicate their mental health concerns to their parents, these studies have serious implications for access to such services, as they suggest that Asian American adolescents may be less likely to communicate mental health concerns with their parents and thus less likely to receive professional help if/when needed. They also highlight a large gap that remains in the research literature, as no study to date has examined whether parent-child communication is more difficult when it is *specifically* about mental health concerns and how that may be related to

help-seeking attitudes and behaviors, particularly in families with heritage cultures that historically endorse more stigma and shame around mental illness and professional help seeking.

Based on a comprehensive review of the literature, it seems likely that ABCI may have more difficulty communicating about certain topics (mental illness may be viewed as disrespectful, embarrassing, shameful, etc. in their family of origin heritage culture) with their immigrant parents than about other topics. This may have serious implications for ABCI as stigma becomes of particular concern when it undermines an individual's chances of successfully seeking mental health services (Corrigan, Druss, & Perlick, 2014). In reviewing the literature about the mental health issues of immigrant individuals and families, it appears that communication specifically about mental health concerns may be a too often overlooked variable that could provide more insight into the process of how stigma impacts help seeking attitudes and behaviors among ABCI. Therefore, it is important to measure communication specifically about mental health concerns between American born children and their immigrant parents to more comprehensively understand the link between stigma and help-seeking for this population. Examining parent-child communication about mental health concerns may help explain the lack of consistency and apparent gap in the literature for the ABCI population.

Acculturation and Acculturation Gap

Berry's (2006) bidimensional model of acculturation has been widely-accepted by researchers as a guiding framework to examine the acculturation process in immigrant populations. The bidimensional model suggests that an individual can adopt and maintain beliefs, values, and behaviors from more than one culture, with acculturation to a new culture being independent of maintenance of the heritage culture. Within each cultural dimension (heritage and

mainstream/host) a combination of high and low levels of each dimension intersect to create four acculturation outcomes/strategies: *integration* (high heritage culture maintenance and high mainstream culture adoption), *assimilation* (low heritage culture maintenance/identification and high mainstream culture adoption), *separation* (high heritage culture maintenance and low mainstream culture adoption), and *marginalization* (low heritage culture maintenance and low mainstream culture adoption). Research on acculturation has found that different acculturation strategies/levels may be associated with different attitudes and perceptions around mental health and help-seeking outcomes, as well as, parent-child relationship quality and adjustment (Asvat & Malcarne, 2008; Farver et al., 2002; Hwang & Ting, 2008).

The values and beliefs of immigrants who endorse more collectivistic heritage cultural orientations are often very different from the mainstream Western ideals most often endorsed in the United States. Thus, it is common for acculturation differences, referred to collectively as an acculturation gap, to arise in immigrant families as ABCI are being socialized in two distinct cultures and may endorse different cultural orientations and values from their immigrant parents (Telzer, 2010). Greater acculturation gaps (i.e., a significant discrepancy between parents and children in adoption of the cultural practices of the dominant culture) have been associated with increased intergenerational family conflict and decreased family cohesion for some ABCI (Asvat & Malcarne, 2008; Costigan & Dokis, 2006; Hwang, Wood, & Fujimoto, 2010).

Costigan and Dokis (2006) conducted a study to examine the relations between parent and child acculturation and child adjustment among 91 immigrant Chinese families in Canada with early adolescents (average age of 12). They assessed acculturation in public (e.g., language use) and private (e.g., values) separately for Chinese and Canadian cultures. They found that poorer adjustment was related to differing abilities and preferences for communicating in

Chinese among early adolescents. The authors suggest several possible reasons for the poorer adjustment including, greater difficulties in effectively discussing areas of disagreement and sharing emotional issues, which may in turn result in less mutual understanding and lower family cohesion. Furthermore, the authors found that when fathers endorsed higher levels of Chinese values, lower endorsement of Chinese values among children was associated with higher levels of conflict intensity and adolescent depression. Costigan and Dokis (2006) recommended the need for future research in this area to examine if such value differences may be explained by discrepant expectations and/or perceptions on multiple family issues and if children's depressed mood actually reflects children's internalization of conflicts. The emphasis in Chinese value systems on the importance of family harmony, family recognition through achievement, and emotional restraint may further exacerbate poorer adjustment, as Chinese American adolescents may worry about being a source of shame to the family or disappointing their parents if they communicate mental health concerns to them (Costigan & Dokis, 2006).

Though most studies support the notion that greater discrepancy in acculturation between children and parents is associated with negative outcomes for both the immigrant family and individual family members (Asvat & Malcarne, 2008; Bajwa, 2010; Rhee, Chang, & Rhee, 2003), attempts to explain this association have been inconsistent and often contradictory due to the different methodologies and measurements employed to assess the acculturation gap. Such limitations make it difficult to draw conclusions from the existing literature that examines ABCI as its target population. Hwang, Wood, and Fujimoto (2010) suggested that simply measuring an "acculturation gap" may be too broad (e.g., languages, values, behaviors, identity, beliefs, ethnicity of peers, and food preferences) and more refined models are needed to determine more proximal acculturation gap phenomena that may be relevant to mental health concerns.

Furthermore, they suggest that although an acculturation gap may set the stage for a problem to develop in an immigrant family, it may not directly increase or decrease risk for mental health problems. For instance, parent-child communication difficulties are a common and major problem cited among family members who grow up in different cultural environments; however, perceived difficulties in communicating beliefs and values are often not accounted for in acculturation gap assessments (Hwang et al., 2010).

Acculturation Gap as a Moderator

As most immigrant families are likely to evidence some level or form of acculturation gap and not all immigrant families develop problems (Hwang, 2006; Hwang et al., 2010), measurement of more proximal variables, such as stigma, communication about mental health concerns, and perceptions/attitudes towards seeking professional psychological services, may be more useful and relevant to help identify targets for clinical intervention among ABCI. Unfortunately, although many studies have documented the critical importance of culture in the variation of stigma experiences (Abdullah & Brown, 2011), only very few have looked at how cultural differences in values and beliefs between immigrant parents and their ABCI may change the mediational relationship of stigma, communication about mental health concerns, and help-seeking attitudes and behaviors.

Researchers have conceptualized that when individuals perceive a need for professional help for a health problem they evaluate the costs and benefits of receiving treatment within the context of social norms regarding seeking help (Eisenberg et al., 2009). Communicating about mental health concerns with family and close friends is often one of the first steps in seeking support and appropriate help for psychological distress. However, having negative expectations

and beliefs about such communications rooted in acculturation gap is likely to further decrease the likelihood of communicating about mental health concerns and therefore may act as a barrier to getting timely access to needed help.

To date only one study has tested whether the acculturation gap was associated with poor communication and value conflict. Bajwa (2010) conducted a thesis study exploring whether general communication problems could act as a mediator to account for the relationship between acculturation gap and well-being. A sample of 116 first and second generation immigrants completed an online survey assessing their experiences during adolescence that relate to the acculturation process. The results found that mainstream acculturation gaps were associated with problematic communication patterns, which helps explain the consistent association of acculturation gaps with negative outcomes such as, increased family conflict and decreased life satisfaction. However, this study did not include measures to assess for stigma and communicating specifically about mental health concerns within the immigrant family context.

Though there are no existing studies that examine the potential moderating role of an acculturation gap on the association between stigma and parent-child communication about mental health concerns within an immigrant family system/context, many studies indirectly provide support for the possible relations. For example, researchers have found that greater acculturation differences between parents and children are associated with negative outcomes on children's well-being, including lower social competence, lower life satisfaction (Phinney & Ong, 2002), increased anxiety and lower self-esteem (Farver, Narang, & Bhadha, 2002), and higher levels of depression (Kim, 2003). The acculturation gap that emerges between immigrant parents and their American-born children has also been shown to be related to communication

difficulties, which often have negative mental health implications (Hwang, Wood, & Fujimoto, 2010).

In an attempt to achieve a more proximal and problem-focused formulation of the acculturation gap, Hwang (2006a) proposed an integrated theory of acculturative family distancing (AFD), which is conceptualized as the distancing that occurs between immigrant parents and their children and is caused by breakdowns in communication and cultural value differences. According to AFD, communication difficulties, along with cultural value differences, increase depression via family conflict. Language fluency gaps are among the factors hypothesized to increase risk for communication difficulties, a core dimension of AFD. Thus, acculturation gaps, according to AFD, are a reflection of cultural affiliation and can also increase risk for communication difficulties because of cultural differences in expression and communication styles (Hwang et al., 2010; Sue, 1990).

In a study that tested the theory and construct of AFD (Hwang, 2006a) on a sample of 105 Chinese American high school students and their mothers, Hwang et al. (2010) found that greater AFD was associated with higher depressive symptoms and risk for clinical depression. However, contrary to the researchers' expectation that differential language fluencies harm mother-youth communication, language gaps between mothers and youths were not significantly associated with the primary outcome variables. The single-item self-report of language fluency used in this study was likely insufficient to measure such a complex phenomenon. Hwang et al. (2010) suggest that it would be beneficial for future studies to measure "not only self-reported fluency but also the ability to get one's point across effectively, comfort in expressing oneself, listening comprehension, and ability to discuss feelings as well as concrete needs..." (p. 664). Moreover, findings from their study also suggested that improving parent-youth communication

may help decrease family conflict and subsequent parent and youth depression, however, the focus of such communication training need not focus on the improvement of language fluency (even though it is often assumed and cited to be a source of the problem). Rather, communication difficulties may be more indicative of cultural differences in communication styles and values (e.g., the degree of directness vs. indirectness or verbal language vs. nonverbal body and facial language), which may be addressed through psychoeducation (Hwang et al., 2010; see also Sue, 1990).

In summary, it seems likely that the distress associated with an acculturation gap may be further compounded for ABCI if they are also struggling with mental health concerns and perceive their immigrant parents to have a stigmatized view of mental illness. That is, ABCI's acute awareness of this stigma may reduce their likelihood of communicating mental health concerns with their parents, which may delay help-seeking or predict more negative views about seeking professional mental health services.

Present Study

The present study aims at better understanding the relations among mental illness stigma, communication about mental health concerns, acculturation, and help-seeking attitude/behaviors of ABCI. Based on the available empirical findings and conceptual reasoning, this study proposes a moderated mediational model in which it is hypothesized that ABCI will endorse higher rates of mental illness stigma and be less likely to communicate their mental health concerns, the greater they perceive the acculturation gap to be between themselves and their immigrant parents; in turn, this will predict more negative help-seeking attitudes and behaviors.

The proposed study will examine the following hypotheses:

1. Mental illness stigma will significantly predict attitudes of seeking professional help services for ABCI. High mental illness stigma will be negatively associated with help-seeking attitudes and behaviors.
2. A greater acculturation gap between ABCI and their immigrant parents will be negatively correlated with parent-child communication about mental health concerns.
3. Mental illness stigma held by ABCI will significantly predict less communication about mental health concerns with their parents, which will in turn lead to more negative help-seeking attitudes and less help-seeking behavior.
4. Acculturation gap will be a moderator for the stigma-communication about mental health concerns relation in that a significant, negative correlation between high mental illness stigma and less communication about mental health concerns will be observed for the subgroup with a greater acculturation gap.

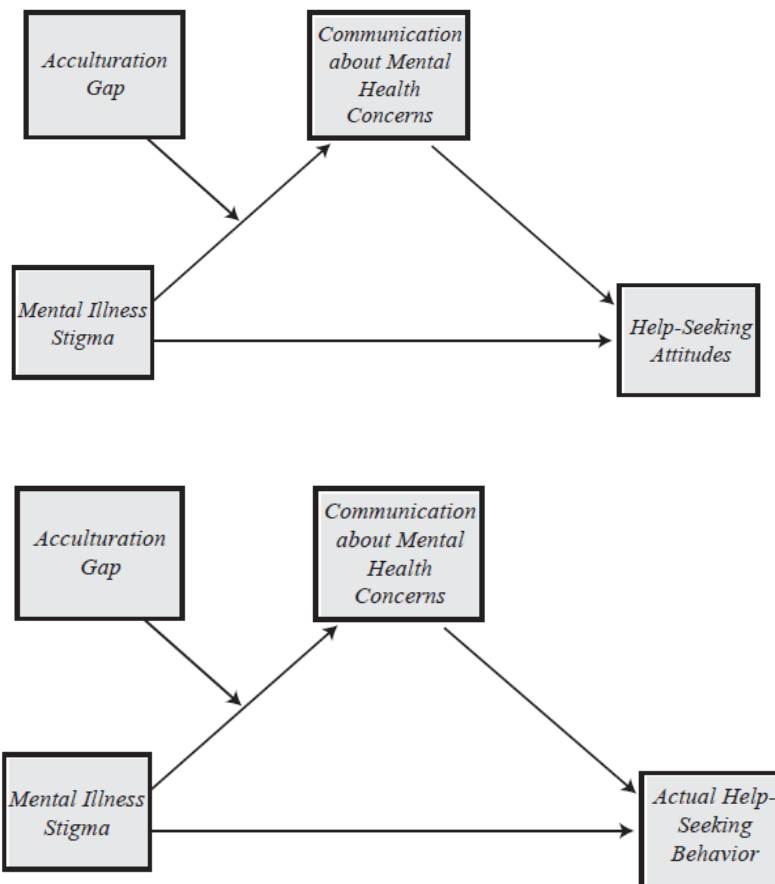


Figure 1. Proposed conceptual models

CHAPTER 3

METHOD

Participants

A G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) analysis was conducted to calculate the sample size needed to achieve adequate power ($\alpha = .90$). The G*Power result showed that a minimum of 165 participants were required for adequate power. Therefore, the current study was carried out with a goal to have 180 ABCI. As the data analyzed in the current study is part of a larger dataset collected for a larger study ($N = 613$), the selection criteria included falling within the age range of 18-24, being born in the United States and/or moved to the U.S. prior to the age of 5, and having at least one immigrant parent.

From those who participated in the larger study, 217 participants met the selection criteria, with 160 (73.7%) having both immigrant parents and 57 (26.3%) noting only one immigrant parent. The average age of participants was 19.83 ($SD = 1.61$). The sample included 147 (67.7%) females and 70 (32.3%) males. Most participants were freshmen ($N = 74$, 34.1%); sophomores and juniors each consisted of about 23% of the sample and seniors consisted of about 18% of the sample. Nearly half ($N = 100$, 46.1%) of the participants indicated that the socioeconomic status (SES) of their family of origin was middle class, with lower and lower middle class ($N = 71$, 32.7%), and upper middle and upper class ($N = 46$, 21.2%) being the next prevalent in the sample, respectively. The demographic data of the present sample are displayed in Table 1.

Table 1

Demographic Information

	Variable	N	Freq (%)
Gender	Female	147	67.7
	Male	70	32.3
Generational Status	Born in US/moved to US before age 5 & both parents immigrants	160	73.7
	Born & grew up in US, one parent immigrant	57	26.3
Caregiver analysis - Immigrant & Primary	Mom	190	87.6
	Dad	25	11.5
	Other (Grandparent)	2	.9
Primary Language	English	55	25.3
	Heritage language	80	36.9
	English & Heritage language (both)	82	37.8
Socioeconomic Status (SES)	Lower/Welfare – Lower Middle	71	32.7
	Middle	100	46.1
	Upper Middle – Upper	46	21.2
Race/Ethnicity	White American	14	6.5
	Black/African American	36	16.6
	Hispanic/Latino American	107	49.3
	American Indian or Alaska Native	1	.5
	Asian/Asian American or Pacific Islander	35	16.1
	Middle Eastern	11	5.1
	Biracial/Multiracial	10	1.0
	Other	3	1.4
School Standing	Freshman	74	34.1
	Sophomore	49	22.6
	Junior	49	22.6
	Senior	39	18.0
	Other	1	.5
Living Arrangement	UNT dorm	89	41.0
	Near/off campus apartment	82	37.8
	Staying at home with my family	39	18.0
	Staying at a relative's house	3	1.4
	Other	4	1.8

Ethical Considerations

Because the study was survey-based and did not involve sensitive variables, minimal risk was involved for research participants. Before implementing the study, informed consent that provided information on the nature and purpose of the study was obtained. The document contained a discussion of any foreseeable risks, potential benefits, confidentiality, a statement that participation is voluntary, and investigator information. Participants were informed that their participation and their responses would remain confidential and that no identifying information would be asked in the survey. Participants were also informed that their participation was completely voluntary and that they could decline participation at any point during the data collection procedure without any consequence.

Procedure

Participants were recruited through SONA, a research participation online sign-up system accessible to undergraduate students in qualified psychology courses. Potential participants were asked to come to the Cross-Cultural Attachment Research Lab at the University of North Texas to complete a paper-and-pencil survey that contained demographic questions and measures of cultural and national identity, acculturation, mental illness stigma, communication about mental health concerns, help-seeking attitude, and help-seeking history. Before beginning the survey, all potential participants were provided an informed consent form and were given the chance to read over the informed consent and ask questions or voice any concerns regarding their participation. Subsequently, simple directions regarding how to complete the questionnaires were given. In addition, individuals were informed that all gathered information would be de-identified, that they had the right to refuse to respond to any question they did not wish to answer, and they had

the right to withdraw from participation at any time without consequences. Individuals were then asked to sign the consent form and complete the questionnaires if they wished to participate. The full questionnaire took about one hour to complete. Compensation included four SONA credits.

As the data analyzed in the current study is part of a dataset collected for a larger study ($N = 591$), certain inclusion criteria were selected. Selection criteria included falling within the age range of 18-24 and being an American-born child of immigrants (ABCI). “ABCI” was operationalized as being born in the U.S. or having moved to the U.S. before the age of 5 and having at least one parent that was born outside of the U.S. that was also listed as a primary caregiver while growing up.

Measures

Demographics

Seventeen questions regarding age, gender identity, sexual orientation, ethnicity, relationship status, parents’ relationship status, social-economic status (SES) of family of origin while growing up, primary language(s) spoken at home during childhood, primary caregiver during childhood, generational status, time in the US (if international or first generation), parent(s) country of origin (if applicable), level of parents’ education, religious/spiritual affiliation, and education level were collected.

Mental Illness Stigma

Personal mental illness stigma (i.e., people’s own stigmatizing attitudes about mental health treatment) was measured through a widely used and well-validated adaptation of the *Discrimination-Devaluation* (D-D) scale (Link, 1987; Link, Cullen, Struening, Shrout, &

Drohrenwend, 1989). Following the practice of other studies (e.g., Eisenberg et al., 2009; Lally et al., 2013), the original wording of the D-D scale which refers to ‘mental patients,’ was changed to refer to people who have received mental health treatment in order to broaden the concept. Respondents were asked how much they agree with each of four statements that begin with “I believe...” or “I think...” or “I would...” followed by a stereotype, example of discrimination, or the opposite (an accepting view or behavior) toward a person with a mental illness or history of mental health treatment on a 6-point Likert scale ranging from *strongly agree* (0) to *strongly disagree* (5). An index of personal stigma was calculated by averaging across the four items on a 0 to 5 scale, where higher numbers refer to higher stigma (Eisenberg et al., 2009). These four items referred to a negative attitude (“I would think less of someone...”), an accepting behavior (“I would accept as a close friend...” and “I would be reluctant to date...”), and an accepting attitude (“I think someone is just as trustworthy...”). To test the validity of the personal stigma scale, Lally and colleagues (2013) conducted a principal confirmatory analysis examining the four items and found that it yielded only one factor with an Eigen value greater than one (2.3) and this one factor accounted for 63% of the variance of the four items in the personal stigma questionnaire. Correlations of .71 - .84 indicated that all four questions loaded heavily onto this one extracted factor. Furthermore, there was a positive correlation between the perceived public and personal stigma variables ($r = .33, p < .001$; Lally et al., 2013). Item-total correlations showed positive correlations between each item and the others on the personal stigma scale (.51 - .65; Lally et al., 2013). Internal consistency was demonstrated to be adequate with a Cronbach’s alpha of .78.

Acculturation Gap

Acculturation toward both the mainstream and heritage cultures were assessed through the Vancouver Index of Acculturation (VIA; Ryder, Alden, & Paulhus, 2000). Based on Berry's (1997) model of acculturation, the VIA is a bidimensional self-report instrument that provides two subscale scores for each participant, the degree of affiliation with his/her heritage culture and with the mainstream culture. Respondents were asked to first identify each of their parents' heritage culture and their own heritage culture as the culture that has influenced them the most (other than American culture), while the mainstream culture was defined as American. The 20 questions are rated on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), and each cultural orientation has 10 items that are worded identically, except for the culture referenced (e.g., "I enjoy social activities with people from the same heritage culture as myself" and "I enjoy social activities with typical American people"). As a result, two scores were computed – one for mainstream acculturation and one for heritage maintenance; the present study focuses on mainstream acculturation. Higher scores indicate a stronger identification with the cultural relationship being measured by that particular subscale, while lower scores suggest decreased acculturation with the referenced culture. The VIA has been found to have strong internal consistency, for the heritage ($\alpha = .82 - .91$) and mainstream ($\alpha = .85 - .89$) culture dimensions and overlapping variance was less than 10% of the total variance, suggesting a substantial degree of independence of the constructs (Ryder et al., 2000). The VIA also exhibited strong concurrent validity with scores on a unidimensional measure of acculturation (Suinn-Lew Asian Self-Identity Acculturation Scale; Ryder et al., 2000; Suinn et al., 1987) and with proxies of acculturation, including percentage of time residing in a Western country, generational status, percentage of time educated in the West, English as a first language (vs. second language), and

self-rated Western identification (Ryder et al., 2000; see also Hwang et al., 2010). The VIA has been widely used to assess acculturation in a variety of groups with different cultural backgrounds and has demonstrated acceptable reliability (Asvat & Malcarne, 2008; Huynh, Howell, & Benet-Martinez, 2009; Ryder et al., 2000). Results from a meta-analysis indicated reliability scores of the VIA for groups of different cultural backgrounds varied from .66 to .92 for non-dominant groups and from .70 to .89 for dominant groups (Huynh, Howell, & Benet-Martinez, 2009).

Participants in the dataset were instructed to complete the VIA three times, once with reference to their own behaviors, and twice with reference to how they perceived each of their parents' behaviors. Though having parents complete the VIA themselves, rather than have the participants fill it out on their parents' behalf, may have resulted in a more accurate measure of the parent's MC acculturation, a number of studies continue to employ the method used in the current study because of the well-documented importance of people's perceptions of their relationships with others (e.g., Rohner, 2005), as that is ultimately the reality that they experienced and that likely guided their behaviors and attitudes (Asvat & Malcarne, 2008; Bajwa, 2010). Participants who grew up in a single parent household or whose parents have remarried were instructed to fill out the survey in reference to the parent(s) most involved in their upbringing. The immigrant parent noted as most involved in the respondent's upbringing in the demographics portion of the survey was used in the acculturation gap calculation. Data provided by participants whose most involved parents were non-immigrants were not included in the final analyses.

A new variable was created to be the acculturation gap index, which was calculated by computing the difference score between ABCI mainstream acculturation and the one of their

most involved parent as reported by ABCI (i.e., ABCI score minus parent's score). Because adult children who grew up in the U.S. with immigrant parents almost always are more acculturative to the American cultural norms than their parents (Goforth, Pham, & Oka, 2015; Merali, 2002; Telzer, 2010), it was expected that the vast majority of the participants would yield a positive-value acculturation index score. Participants who yielded negative-value acculturation gap index scores ($N = 16$) were excluded from the sample for the model examination.

Mental Health Concerns Communication

At this time, there are no established measures to assess for parent-child communication difficulties related to mental health concerns specifically. Therefore, mental health concerns communication (MHCC) with parents was assessed using four slightly modified items from the Parent-Adolescent Communication Scale (PACS; Barnes & Olson, 1982) for the purpose of this study.

The PACS has been used in a variety of studies examining quality of communication between parents and children, and has demonstrated adequate reliability (Bajwa, 2010; Barnes & Olson, 1982; Hartos & Power, 2000; Rhee, Chang, & Rhee, 2003). The PACS has 20-items but to more fully capture communication issues specifically related to mental health concerns, four existing PACS questions were slightly modified and used to assess the mediator variable. They include "I could discuss my *mental health concerns* [beliefs] with my mother/father without feeling restrained or embarrassed", "I was satisfied with how my mother/father and I talked together *about mental health*", "[There are topics] I avoided discussing *mental health concerns* with my mother/father", and "It was easy for me to discuss *mental health concerns* [all my true feelings] with my mother/father". An index score representing ABCI's willingness to

communicate about mental health concerns with their immigrant parent was calculated by averaging across the four items on a 1 to 5 scale, with higher numbers indicating more open communication about mental health concerns. This index score was used to test the hypotheses of the current study. Exploratory factor analysis (EFA) was run to examine if the four modified PACS items revealed a cohesive factor for ABCI.

Help Seeking Attitude

The Self-Stigma of Seeking Help (SSOSH; Vogel, Wade, & Haake, 2006) scale was used to measure participants' attitudes about seeking professional help. The SSOSH is a 10-item self-report measure that assesses how much participants feel their self-esteem would be threatened by seeking help from a psychologist or other mental health professional. Responses are on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater self-stigma (5 of the items are reverse scored). Sample items from the scale include, "I would feel inadequate if I went to a therapist for psychological help" and "I would feel worse about myself if I could not solve my own problems." Confirmatory factor analyses indicated that the SSOSH has a unidimensional factor solution and good internal consistency reliability ($\alpha = .86 - .90$). The correlation between participants' Time 1 ($N = 546$) SSOSH total score and their total SSOSH score 2 months later ($N = 227$) was .72, suggesting that the measure has good test-retest reliability over a 2-month period. In support of its construct validity there was a positive association between the SSOSH scale and anticipated risks, public stigma, and the tendency to conceal personal information, as well as the negative associations with anticipated benefits and the tendency to disclose distressing emotions. Criterion validity was supported by the negative associations of the SSOSH scale with attitudes toward seeking professional help and intent to

seek counseling. The SSOSH also uniquely predicted attitudes toward and intent to seek psychological help and differentiated between individuals who sought psychological services and those who did not across a 2-month period. In order to examine cross-cultural validity and reliability of the SSOSH, Vogel and colleagues (2013) administered the scale to samples from 6 different countries (England, Greece, Israel, Taiwan, Turkey, and the United States) and found that the single-factor construct held across all countries and the internal consistencies across country samples (.77 - .89) were consistent with previous reports based on samples of college students (.79 - .92; Vogel et al., 2006) and non-majority samples (.79 - .89; Soheilian & Inman, 2009; Vogel et al., 2011).

Actual Mental Health Services Use

Two questions taken from a national study on mental healthcare use (Healthcare for Communities Study; Wells, Sturm, & Burnam, 2003) were administered to measure actual use of mental health services (“Have you taken any psychotropic medications in the past 12 months? Circle one: Yes/No” and “Have you received any therapy or counseling for mental or emotional health in the past 12 months? Circle one: Yes/No”). This measure was coded 0 if “No” was selected and 1 if “Yes” was selected.

CHAPTER 4

RESULTS

Data Cleaning

Several data cleaning procedures were conducted prior to running the analyses. First, the data was checked for missing data, problematic or extreme scores, and data entry errors. Data entry errors included entering multiple digits (e.g., 55 instead of 5) or values that were greater than the Likert scale (e.g., entering a 7 for a 1-5 scale); these were corrected by verifying original entries. Responses to the validity items (e.g., “This item is to test your concentration; please circle both 2 and 5 for this item.”) were also assessed and participants who answered both validity items correctly were included in the data analyses. Ten cases were removed due to incorrect responses on the validity items. Cases that were missing substantial data (more than 10%; Hair, Black, Babin, & Anderson, 2010) were identified and excluded from analyses. Next, each measure was scored according to its author’s guidelines. Skewness, kurtosis, and outliers of all major variables were computed to evaluate the normality of the data.

Examination of univariate outliers was done by examining the skewness statistics and standard error values as suggested by Tabachnick and Fidell (2013). While most of the variables were not significantly skewed, acculturation gap was significantly positively skewed. As recommended by Tabachnick and Fidell (2013), logarithm transformation procedures, $\log_{10}(x+3)$, were performed for acculturation gap (+3 was added because log transformation does not handle values of 0). After the variable was transformed, no cases were detected as univariate outliers using z scores and boxplot methods. Next, multivariate outliers were examined using the multivariate Mahalanobis distance statistic (M -distance). Only one case was identified as a significant multivariate outlier using the p value of less than .001, as

recommended by Tabachnick and Fidell (2013), and was deleted. The final number of participants left after data cleaning was 217. Names of major variables, their statistics, transformations, and standard errors are displayed in Table 2.

The final stage of the data cleaning process involved assessing and resolving missing data in the 217 retained cases. Missing data in the retained data set was replaced using the multiple imputation method with 5 imputations, as suggested by Schlomer, Bauman, and Card (2010).

Table 2

Skewness and Kurtosis of Means & Transformed Variables

Variable	Before Transformation				Type	After Transformation			
	Skewness		Kurtosis			Skewness		Kurtosis	
	Statistic	SE	Statistic	SE		Statistic	SE	Statistic	SE
MI Stigma	.667	.165	-.282	.3	None	-	-	-	-
AccGap	.798	.173	.088	.3	Log10+3	.445	.173	-.619	.344
MHCC	-.059	.165	-1.155	.329	None	-	-	-	-
SSOSH	.217	.166	-.321	.330	None	-	-	-	-

Note. Type = Transformation Type. Log = Logarithm. MI Stigma = Mental Illness Stigma (Personal). AccGap = Acculturation Gap. MHCC = Mental Health Concerns Communication. SSOSH = Self-Stigma of Seeking Help

Descriptive Statistics of Measured Variables

The means, standard deviations, and reliabilities of major variables are displayed in Table 3. As shown in the table, acculturation to the mainstream culture of the U.S. was relatively high, with a mean score of 4.24 ($SD = .54$) out of a maximum score of 5. Mental Illness stigma was relatively low with a mean score of 1.12 ($SD = .94$) out of a maximum score of 5. Cronbach's alphas ranged from .77 for Mental Illness Stigma to .90 for immigrant parent Mainstream Culture Acculturation; all exceeded the widely accepted standard of .70, and all but one scale

(Mental Illness Stigma) exceeded the preferred standard of .80 (DeVellis, 2003), demonstrating reliability of each scale in the current sample.

Table 3

Means, Standard Deviations, and Reliabilities for the Study Instruments & Major Variables

Variable		<i>M</i>	<i>SD</i>	α	<i>z</i> *	<i>N</i>	Excluded
Mental Illness Stigma (Personal)		1.12	.94	.75	.77	217	0
Acculturation Gap – Mainstream Gap		.95	.76			198	19
Mainstream Acculturation (MC-VIA)	Participant	4.24	.54	.82	.83	203	14
	Mother	3.42	.73	.86	.87	197	20
	Father	3.42	.82	.89	.89	194	23
	Immigrant parent	3.40	.74	.86	.87	197	20
Heritage Acculturation (HC-VIA)	Participant	4.04	.73	.89	.89	206	11
	Mother	4.42	.59	.89	.89	201	16
	Father	4.39	.65	.90	.90	196	21
	Immigrant parent	4.43	.59	.89	.90	201	16
Mental Health Concerns Communication (MHCC)	Mother	3.08	1.25	.88	.88	217	0
	Father	2.60	1.20	.86	.87	212	5
	Immigrant Parent	2.98	1.30	.88	.88	209	8
Self-Stigma of Seeking Help (SSOSH)		2.40	.72	.85	.85	215	2

*Cronbach's alpha (α) based on standardized items.

Level of Acculturation and Acculturation Gap

Mean acculturation scores for heritage and mainstream culture for the participants and each of their parents are shown in Table 3. Paired-samples *t* tests were employed to determine whether differences observed in participants' own acculturation scores for heritage and mainstream cultures, and between participants and their parents' acculturation scores were significant. In total, seven paired-samples *t* tests were computed. Results indicated that

participants reported having greater acculturation to mainstream (American) culture than to their heritage culture, $t(216) = 3.67, p < .001$. In addition, participants reported significantly higher mainstream acculturation than their mother, $t(213) = 14.84, p < .001$, and father, $t(208) = 14.16, p < .001$. In contrast, participants perceived themselves as having significantly lower heritage acculturation than their mother, $t(211) = -7.80, p < .001$, and father, $t(206) = -6.32, p < .001$.

Finally, the analysis revealed no significant difference between the perceived mothers' and fathers' perceived acculturation levels for mainstream, $t(208) = -.27, p = .789$, and heritage culture $t(205) = 1.29, p = .199$. Because there was no significant difference between the two parents on the acculturation scores perceived by participants, it was decided to use the acculturation score associated with the parent who was identified by the participant as the primary caregiver as long as this parent is also an immigrant. This score, ABCI's perception of their immigrant parent's MC acculturation, was then subtracted from the participants' MC acculturation score in order to obtain the MC acculturation gap index score. Several studies have highlighted the importance of considering ABCI's perception of a MC acculturation gap by concurrently considering personal MC acculturation and perceived parent MC acculturation to offer a more nuanced understanding of its role on the experience of ABCI (Asvat & Malcarne, 2008; Bajwa, 2010; Dinh & Nguyen, 2006; Telzer, 2010). In a thorough review of the research on the acculturation gap-distress model, Telzer (2010) describes different methods of calculating the acculturation gap. She notes that studies using the difference method in calculating the acculturation gap often do not consider the importance of the direction in their interpretation and instead confound positive and negative gaps when calculating difference scores. Moreover, it is difficult to model the pattern of positive and negative values created by the difference scoring

methods with a regression analysis. Following these recommendations, the current study excluded participants with negative acculturation gap values ($N = 16$; 7.48%) for the analyses.

Preliminary statistical analyses were conducted to examine the potential effects of age, gender, and SES on the major variables. Pearson Product Moment Correlations were calculated to examine whether or not age was significantly correlated with the major variables. Results displayed in Table 4 show that none of the major variables were significantly correlated to age. A two-way MANOVA was conducted to examine the main effects of gender and SES on the outcome variables of interest, as well as any interaction effects of gender*SES on the outcome variables. Before conducting the MANOVA, SES was re-grouped into three levels in an attempt to distribute participants more evenly: low, medium, and high. Findings indicated there were no significant multivariate effects for any of the outcome variables based on an individual's gender ($F(4, 187) = .33, p = .859$), SES ($F(8, 374) = 1.20, p = .297$), or both ($F(8, 374) = 1.21, p = .292$).

Table 4

Correlations between Age and Major Variables

	Age	MI Stigma	AccGap	MHCC	SSOSH
Age	-	-	-	-	-
MI Stigma	-.001	-	-	-	-
AccGap	.056	-.015	-	-	-
MHCC	-.060	.135*	-.209**	-	-
SSOSH	-.075	.373**	.004	-.146*	-

Note. MI Stigma = Mental Illness Stigma (Personal). AccGap = Acculturation Gap (transformed). MHCC = Mental Health Concerns Communication. SSOSH = Self-Stigma of Seeking Help.*Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed).

Factorial Validity

As previously described, four items were modified from the original PACS to assess ABCI participants' willingness to communicate about mental health concerns with their immigrant parents. An exploratory factor analysis (EFA) was conducted to examine whether these four items would load well together on a single factor. A principal components extraction was used to estimate the number of factors and results revealed one factor with an eigenvalue ≥ 1 . This factor had an eigenvalue of 2.95 and accounted for 73.82% of the variance. Eigenvalues for the remaining factors were all $< .5$. The scree plot revealed a visual break after the first factor as well. All of the aforementioned findings (Table 5) suggested that the data from the ABCI sample support a unidimensional factor solution for the proposed measure of mental health concerns communication (MHCC).

Table 5

Factor Loadings for Measure of Mental Health Concerns Communication (MHCC) in ABCI Sample (N = 209)

Item	Factor I (MHCC)
mhcPACS1	.882
mhcPACS7	.831
mhcPACS14	.810
mhcPACS15	.911

Correlation Analysis

Bivariate correlations between all variables of interest were examined prior to running the parallel PROCESS analyses. Table 6 displays the results of the correlations.

Table 6

Correlation Matrix of the Study Variables

	1	2	3	4
1. MI Stigma	1	-	-	-
2. AccGap	-.015	1	-	-
3. MHCC	.135*	-.209*	1	-
4. SSOSH	.373**	.004	-.146*	1

Note. MI Stigma = Mental Illness Stigma (Personal). AccGap = Acculturation Gap (transformed). MHCC = Mental Health Concerns Communication. SSOSH = Self-Stigma of Seeking Help. * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed).

I conducted an independent samples t test to determine whether there is a difference in the scores on the major variables among individuals who indicated they had sought professional mental health services (either psychotropic medication or psychotherapy; $N = 44$) and individuals who had not sought professional mental health services ($N = 173$) in the past 12 months. I used Levene's Test for Homogeneity of Variances to test the assumptions of the t test. Levene's was not significant for mental illness stigma ($F = 1.01, p = .315$), so equal variances are assumed for this variable. On the other hand, Levene's was significant for mainstream culture (MC) acculturation gap ($F = 7.31, p < .05$) and communication about mental health concerns ($F = 6.77, p < .05$), so equal variances are not assumed.

The results of the t test were significant, $t(215) = 2.14, p < .05, d = .38$, for mental illness stigma. There was a significant difference in personal mental illness stigma between those that reported help-seeking behavior (seeking therapy or psychotropic medication) in the past 12 months and those that did not. Specifically, individuals who reported no actual help-seeking behaviors over the past 12 months had significantly higher levels of personal mental illness stigma. The results of the t test were not significant for MC acculturation gap, $t(49.79) = -.55, p$

= .584, $d = .11$, suggesting there was no difference in MC acculturation gap between individuals who reported actual help seeking behaviors in the last 12 months and those who did not. Finally, the t test was also not significant for communication about mental health concerns, $t(54.16) = 1.04$, $p = .303$, $d = .19$, suggesting there was no difference in communication about mental health concerns between those who reported actual help seeking behaviors in the last 12 months and those who did not. Table 7 displays the descriptive statistics for the study variables across actual help-seeking behavior.

Table 7

Descriptive Statistics for Study Variables across Actual Help Seeking Behavior

Study Variable	Actual Help Seeking	N	M	SD	t
MI Stigma	No	173	1.19	.95	2.14*
	Yes	44	.85	.82	
MC AccGap	No	159	.59	.08	-.55
	Yes	39	.60	.10	
MHCC	No	168	3.03	1.24	1.04
	Yes	41	2.76	1.50	

Note. MI Stigma = Mental Illness Stigma (Personal). MC AccGap = Mainstream Culture Acculturation Gap (transformed). MHCC = Mental Health Concerns Communication. * $p < .05$.

Main Analyses

During the data collection process, an error was discovered in the surveys regarding the question meant to ask about actual help-seeking behaviors. Initially, the question asked “Have you taken any psychotropic medications or received any therapy or counseling for mental or emotional health in the past 12 months? (Yes/No)”. This was problematic because if a participant responded “yes” it was impossible to know whether they were referring to having taken psychotropic medications, receiving counseling/therapy, and/or both in the last 12 months. This

is an important distinction to make, as psychotropic medication may be prescribed by primary care physicians or family doctors and thus may occur in a very different context than therapy would. Especially relevant to the current study, some research findings have suggested that seeking professional psychological help through this means is often associated with less mental illness stigma (Corrigan, Druss, & Perlick, 2014). We corrected this question by splitting it into two separate “yes/no” items that would allow us to differentiate between participants who had taken psychotropic medication and/or received therapy/counseling for mental or emotional health in the past 12 months. However, due to inadequate power, the actual help-seeking behavior variable was excluded from the main analyses for the mediational model and moderated mediational model, though some post-hoc analyses were still performed with this variable.

Examination of the Mediational Model

First, we examined the mediation effect of communication about mental health concerns on the association between mental illness stigma and negative attitudes about seeking professional help using the PROCESS (Hayes, 2013) Model 4. As expected, personal mental illness stigma was significantly related to negative attitudes about seeking professional help ($\beta = .29, SE = .05, 95\% CI [.19, .38]$). Furthermore, personal mental illness stigma was found to have a significant effect on communication about mental health concerns ($\beta = .18, SE = .09, 95\% CI [.004, .36]$). When both personal mental illness stigma and communication were considered as predictors, the effect of communication about mental health concerns on professional help-seeking attitudes was significant ($\beta = -.12, SE = .04, 95\% CI [-.19, -.04]$). The mediation model with both predictors explained 18% of the variance in professional help-seeking attitudes ($R^2 = .18, p < .001$). Analysis from a bias-corrected bootstrap with 5,000 resamples revealed that the

indirect effect of mental illness stigma on professional help-seeking attitudes is significantly different than zero ($\beta = -.02$, $SE = .013$, 95% CI $[-.050, -.001]$). Thus, communication about mental health concerns *partially* mediated the relation between personal mental illness stigma and professional help-seeking attitudes.

Moderated Mediation Analyses

Analyses of Model 7 in PROCESS (Hayes, 2013), a SPSS macro, were conducted to examine the proposed moderated mediational model. Model 7 of the PROCESS macro allows us to run a moderated mediation and computes an estimation of the direct effect of mental illness stigma (X) on SSOSH (Y), as well as the conditional indirect effects of mental illness stigma (X) on SSOSH (Y) through communication about mental health concerns (M) with immigrant parent(s). The effects of mental illness stigma on communication about mental health concerns are modeled as moderated by the mainstream culture acculturation gap (W). In the first analysis, professional help-seeking attitudes was entered as the outcome variable (Y), mental illness stigma was entered as the independent variable (X), communication about mental health concerns was entered as the mediator variable (M), and the mainstream culture acculturation gap was entered as the moderator (W). The current analysis employed Model 7 with bias-corrected bootstrap with 5,000 resamples and mean-centered product terms. As indicated in Table 8, although the bivariate correlation between personal mental illness stigma and MHCC was significant, the personal mental illness stigma was not a significant predictor for MHCC when the mainstream culture (MC) acculturation gap and the interaction term (X*W) were included in the model. The interaction term (acculturation gap*mental illness stigma) approached significance, $b = -2.44$, $p = .057$, 95% C.I. $[-4.94, .070]$.

Table 8

MHCC Predicted from MI Stigma & MC AccGap

Predictor	B	Boot SE	<i>t</i>	<i>p</i>	95% Bootstrap Confidence Interval (CI)		<i>F</i>	ΔR^2
					<i>LLCI</i>	<i>ULCI</i>		
MI Stigma (X)	.13	.10	1.22	.225	-.078	.33		
MC AccGap (W)	-2.42	1.17	-2.06	.041	-4.74	-.11		
X*W	-2.44	1.27	-1.92	.057	-4.95	.070	3.68	.02

Note: MI Stigma = Mental Illness Stigma (personal), MC AccGap = Mainstream culture acculturation gap, MHCC = mental health concerns communication, X*W = interaction term: MI Stigma*MC AccGap. MI stigma & MC AccGap values were centered.

Table 9 shows the results of the regression predicting professional help-seeking attitudes from MI stigma and MHCC. The findings indicate that MI stigma ($\beta = .29$, 95% C.I. [.18, .39]) significantly predicts professional help-seeking attitudes. Furthermore, when holding constant MI stigma, participants relatively lower in MHCC report more negative attitudes about seeking professional help relative to those more open to communicating about mental health concerns with their immigrant parent ($\beta = -.12$, 95% C.I. [-.20, -.05]).

Table 9

SSOSH Predicted from MI Stigma & MHCC

Predictor	β	Boot SE	<i>t</i>	<i>p</i>	95% Bootstrap Confidence Interval (C.I.)	
					<i>LLCI</i>	<i>ULCI</i>
MI Stigma (X)	.29	.054	5.29	<.001	.18	.39
MHCC (M)	-.12	.038	-3.32	.0011	-.20	-.05
<i>R</i> ²	.16					
<i>F</i>	18.17**					

Note: MI Stigma = Mental Illness Stigma (personal), MHCC = mental health concerns communication; MI stigma & MC AccGap values were centered. ** $p < .001$

The hypothesized interaction, although slightly above .05, was further examined by examining the conditional indirect effects among the three subgroups by the moderator. Results shown in Table 10 suggest that the indirect effect of mental illness stigma on help seeking attitudes via communication about mental health concerns was significant when the MC acculturation gap was .08 standard deviations below the mean, but not significant above that. Because the differential effect mostly occurred on the path from mental illness stigma on communication about mental health, a slope analysis on the directions and strengths of the relationships between personal mental illness stigma and communication about mental health concerns with parents by mainstream acculturation gap was further examined and the graphic display of the findings is presented in Figure 2. Specifically, personal mental illness stigma was significantly and positively related to communication about mental health concerns for those with low acculturation gap with their immigrant parents. However, the strength of the correlation reduced as the acculturation gap increased and for those with high acculturation gap, the direction of the correlation was altered to become negative.

Table 10

The Conditional Indirect Effects of MI stigma, via Communication about Mental Health Concerns, on Attitudes about Seeking Professional Mental Health Services by Levels of Mainstream Culture Acculturation Gap

AccGap	Indirect effect	Boot SE	Boot LLCI	Boot ULCI
-.08 (Low, -1 SD)	-.04	.02	-.10	-.01
.00 (Average, M)	-.02	.01	-.05	.01
.08 (High, 1 SD)	.01	.02	-.03	.06
Index of Moderated Mediation	Index	Boot SE	Boot LLCI	Boot ULCI
AccGap	.30	.22	-.01	.83

Note: MI Stigma = Mental Illness Stigma (personal), AccGap = Mainstream culture acculturation gap, MHCC = mental health concerns communication, SSOSH = Self-Stigma of Seeking Help; Mental illness stigma and mainstream culture acculturation gap values were centered.

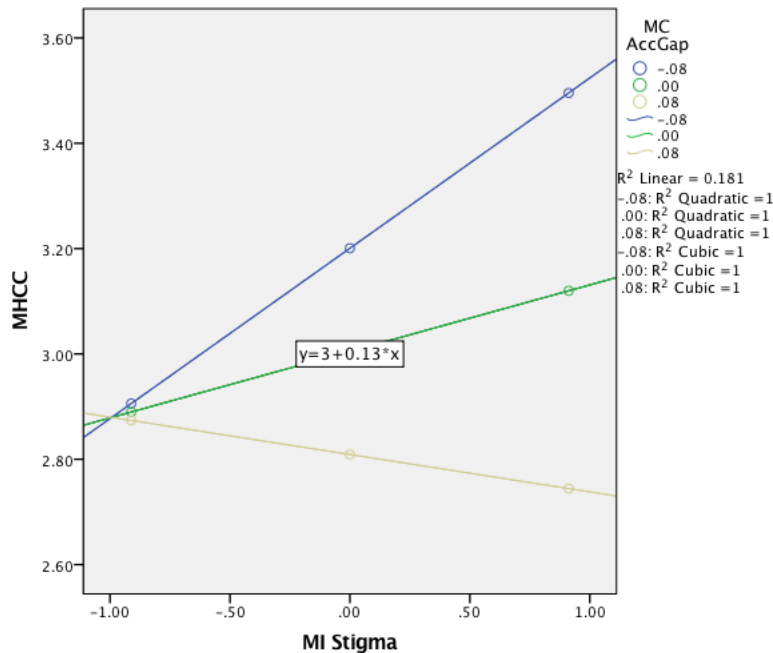


Figure 2. Slope analysis on the directions and strengths of the relationships between personal mental illness stigma and communication about mental health concerns with parents by mainstream acculturation gap

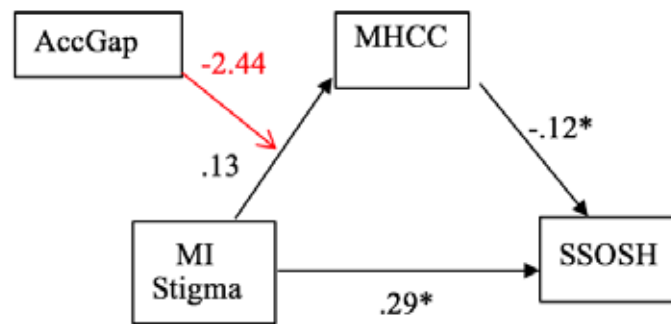


Figure 3. Strength of the correlation reduced as the acculturation gap increased and for those with high acculturation gap.

Post-Hoc Analyses

Due to the error previously described during the data collection process, there was inadequate power to test the current study's original hypotheses involving actual help-seeking behaviors. Thus, post-hoc logistic regression analyses were employed to predict the probability

that a participant had actually sought help in the past 12-months. The predictor variables were mental illness stigma and communication about mental health concerns. Two parallel logistic regression analyses were run with the sample that took the survey after the error was discovered and corrected (therapy only and psychotropic medication only) and one logistic regression was run with the total sample (combined those that checked “yes” to either therapy or medication in the past 12 months from the earlier part of data collection with those that checked either therapy or medication from the corrected version).

Therapy Only

A test of the full model versus a model with intercept only was not statistically significant for predicting whether an individual had sought professional therapeutic services in the past 12-months, $\chi^2 (2, N = 124) = .97, p = .615$. The model was able correctly to classify 100% of those who did not seek professional counseling services in the past 12 months and 0% of those who did, for an overall success rate of 80.6%. Table 11 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, neither mental illness stigma or communication about mental health concerns had significant partial effects. Though not significant, the odds ratio for personal mental illness stigma indicates that when holding communication about mental health concerns constant, as mental illness stigma increases we have a decreased likelihood that a person has sought professional therapeutic services within the last 12 months ($\beta = -.14, p = .576$), more specifically, with every unit increase in mental illness stigma, the odds of seeking therapeutic services in the last 12 months decrease by a factor of .87. Although also not significant, the effect of communication about mental health concerns indicated that as willingness to communicate

mental health concerns increases, there is an increase in likelihood of having sought professional therapeutic services in the past 12 months ($\beta = .16, p = .382$), more specifically, with every unit increase in willingness to communicate mental health concerns, the odds of seeking therapeutic services in the last 12 months increase by a factor of 1.17.

Table 11

Logistic Regression Predicting Actual Use of Therapeutic Services Over the Past 12 Months from Mental Illness Stigma and Communication about Mental Health Concerns

Predictor	β	Wald χ^2	p	Odds Ratio
MI Stigma	-.14	.31	.576	.87
MHCC	.16	.18	.382	1.17

Note: MI Stigma = Mental Illness Stigma (personal), MHCC = mental health concerns communication.

Psychotropic Medication Only

A test of the full model versus a model with intercept only was not significant for predicting whether an individual had taken psychotropic medication in the past 12-months, $\chi^2 (2, N = 124) = 4.05, p = .132$. The model was able correctly to classify 100% of those who did not take psychotropic medication over the past 12-months and 0% of those who did, for an overall success rate of 90.3%. Table 12 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, neither mental illness stigma or communication about mental health concerns had significant partial effects. When holding communication about mental health concerns constant, mental illness stigma did not significantly predict psychotropic medication use over the past 12 months ($\beta = -.22, p = .537$), though the results did indicate that with every unit increase in personal mental illness stigma, likelihood of having taken psychotropic medication in the past 12 months

decreased by a factor of .80. Interestingly, however, the results indicated that as scores on willingness to communicate mental health concerns increased, the probability of falling into the actual help seeking group (i.e., psychotropic medication in the last 12 months) decreased ($\beta = -.45, p = .087$).

Table 12

Logistic Regression Predicting Actual Use of Psychotropic Medication Over the Past 12 Months from Mental Illness Stigma and Communication about Mental Health Concerns

Predictor	β	Wald χ^2	p	Odds Ratio
MI Stigma	-.22	.38	.537	.80
MHCC	-.45	2.93	.087	.64

Note: MI Stigma = Mental Illness Stigma (personal), MHCC = mental health concerns communication.

Therapy or Psychotropic Medication

A test of the full model versus a model with intercept only was not significant for “therapy or psychotropic medication” in the past 12-months, $\chi^2 (2, N = 209) = 4.78, p = .092$. The model was able correctly to classify 100% of those who did not seek professional therapeutic services or take psychotropic medication over the past 12-months and 0% of those who did, for an overall success rate of 80.4%. Table 13 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, neither mental illness stigma or communication about mental health concerns had significant partial effects. The results of this analyses yielded similar findings to the previous analysis with psychotropic medication only.

Table 13

Logistic Regression Predicting Actual Use of Either Therapeutic Services or Psychotropic Medication Over the Past 12 Months from MI Stigma and Communication about Mental Health Concerns (N = 209)

Predictor	β	Wald χ^2	p	Odds Ratio
MI Stigma	-.37	3.18	.075	.69
MHCC	-.13	.89	.345	.88

Note: MI Stigma = Mental Illness Stigma (personal), MHCC = mental health concerns communication.

CHAPTER 5

DISCUSSION

The current study employed the bidimensional model of acculturation as described by Berry (1997; 2005) to investigate a possible moderated mediational relationship among mental illness (MI) stigma, mainstream culture (MC) acculturation gap, communication about mental health concerns between the child and parents, and negative attitudes about seeking professional help and actual help-seeking behaviors among American-born children of immigrants (ABCI) between the ages of 18 to 24. Our findings suggest that higher levels of mental illness stigma are associated with more negative attitudes about seeking professional mental health services among ABCI. In addition, although the mediational model was generally supported, we found an unexpected positive relation between MI stigma and MHCC, in that higher MI stigma was associated with more willingness to communicate about mental health concerns. When considering the moderator role of the mainstream culture acculturation gap on the mental illness stigma-MHCC path, the interaction effect was found to approach significance. Follow-up conditional indirect effect analyses indicated that the association between personal mental illness stigma and communication about mental health concerns for ABCIs with a low MC acculturation gap with their immigrant parent was positive, but it became negative for those with high MC acculturation gap.

Early studies on the acculturation gap generally assumed that ABCI adopt the practices, values, and identifications of the country of residence faster than their parents, and thus, would be more acculturated than the parent in the mainstream culture of the host country (i.e., MC acculturation gap higher). For instance, in the United States, traditional cases of acculturation gaps appear when a child embraces the mainstream “American” culture by starting to be more

like their peers in the way they dress, talk, and behave, and adoption of their peers' cultural values; their immigrant parent, on the other hand, maintains their native language, follows the values of the culture of their country of origin (i.e., heritage culture), and spends the majority of their time with other immigrants from their country of origin (Buckingham, 2013). As expected, participants in the current study described themselves as generally more mainstream acculturated than their parents. Our results regarding the acculturation gap were consistent with the majority of previous research studies examining mainstream acculturation levels in parent-child dyads (Bajwa, 2010; Farver et al., 2002; Ho, 2010). There are several possible explanations for why "mainstream" American cultural identity of so many of the ABCIs in this and prior studies is higher than that of their parents. According to most acculturation gap theories, ABCI may be expected to identify less with their parent's heritage culture and more with mainstream American culture because they have an easier time "blending" into the American society and picking up the cultural values, practices, and language, and their connection with their parent's heritage culture and country becomes substantially weaker (Birman, 2006).

The first objective of this study was to determine the impact of MI stigma on help-seeking attitudes and behaviors. Specifically, we hypothesized that higher MI stigma would be associated with fewer actual help-seeking behaviors and more negative attitudes about seeking professional mental health services. Our findings provided support for our hypothesis on help-seeking attitudes, in that personal mental illness stigma was associated with more negative help-seeking attitudes. This concurs with a myriad of studies that have found that higher MI stigma is associated with more negative help-seeking attitudes (Han & Pong, 2015; Ting & Hwang, 2009). However, when we ran the model with the smaller sample that was administered the survey with the corrected actual help-seeking items, we did not find support for our model. That is, our

hypothesis that mental illness stigma would be associated with less actual help-seeking behaviors was not supported in this sample of ABCI. The findings for the actual help-seeking behaviors should be interpreted with caution due to the small sample size that resulted from the error discovered during data collection.

The second objective of the study was to examine the mediational model. We hypothesized that relation between mental illness stigma and negative help-seeking attitudes and behaviors would be mediated by ABCI's willingness to communicate specifically about their mental health concerns with their immigrant parent. Though the indirect effects of MI stigma held by ABCI significantly predicted more negative professional help-seeking attitudes through communication about mental health concerns with their parents, we found an unexpected, positive relation between MI stigma and MHCC, in that higher MI stigma was associated with more willingness to communicate about mental health concerns. There are a few possible reasons for this finding, it may be that for ABCI who have higher mental illness stigma, if they were to experience mental health concerns, they would feel most comfortable talking to their parents about them rather than a professional mental health provider. This is congruent with previous research which has suggested that because of the socially interdependent and hierarchical nature of many Eastern cultures, individuals are very concerned about how others perceive them, and the concern about loss of face goes beyond the individual (Han & Pong, 2015); thus, seeking professional psychological services is often considered shameful, a violation of the family hierarchy and harmony, and potentially disgraceful to the entire family (Shea & Yeh, 2008). As a result, despite endorsing personal mental illness stigma, the emphasis on family cohesion often observed in immigrant families may actually create a context in which ABCI are more willing to communicate about mental health concerns with their parents (as opposed to an individual

outside of the family, such as a professional mental health provider; Ting & Hwang, 2009). As noted earlier, the following findings concerning actual help-seeking behaviors should be interpreted with caution. Our predictors, personal mental illness stigma and communication about mental health concerns, were not observed to accurately predict actual help seeking behaviors (defined as therapy or counseling for mental or emotional concerns) over the past 12 months for ABCI. Interestingly though, our model did a better job of predicting who had *not* sought therapy or counseling over the past 12 months versus predicting those that had sought help over the past 12 months. Furthermore, though not statistically significant, our findings did suggest that ABCI who reported more openness in communication about mental health concerns with their parent were more likely to have sought professional counseling/therapy services within the past 12-months.

The next objective of the study was to explore the possible role of the mainstream culture (MC) acculturation gap between ABCI and their immigrant parent on the mediational model and particularly on the path between personal stigma and communication. We hypothesized that ABCI may find it especially challenging to communicate about their personal mental health concerns if they have more MI stigma and also perceive a greater MC acculturation gap between themselves and their immigrant parent. Our results indicated that this hypothesis was supported. Our results are consistent with the literature on acculturation in immigrant families and the relation between greater acculturation gaps and problematic communication patterns/styles (Bajwa, 2010; Hwang & Wood, 2006, 2009). Hwang (2006) suggested that one of the primary ways that an acculturation gap between ABCI and their parent(s) disrupts family functioning is by increasing the incidence of miscommunication and misunderstanding. Furthermore, research has highlighted the disruptive effects of not sharing beliefs, values, and practices on

communication between parents and children; communication theories have also indicated that people with divergent points of view often experience difficulty gaining information from each other (Wang, Kim, Anderson, Chen, & Yan, 2012). Similarly, ABCI who perceive greater cultural discrepancy in the beliefs and values they hold from those of their parents, may be discouraged from communicating about their personal mental health concerns. For instance, ABCI who are more MC acculturated and perceive their parents to be significantly less MC acculturated, may come to feel or assume that their parents do not know or understand their daily activities and/or experience, and thus, do not feel as comfortable or open in communicating about concerns they themselves hold stigmatized views about (i.e., mental health concerns).

To date, no studies can be located that examined whether a MC acculturation gap between ABCI and their immigrant parent would change the previously observed associations between MI stigma and parent-child communication. Furthermore, previous research has not examined ABCI's reported willingness to communicate about mental health concerns specifically with their immigrant parent. The present study explored the direct and conditional indirect effects of MI stigma on professional mental health help-seeking attitudes through communication specifically about mental health concerns with immigrant parent(s) while concurrently examining whether the relation between MI stigma and communication about mental health concerns varied as a function of MC acculturation gap. Our findings demonstrated that the proposed moderated mediational model was not supported for attitudes related to seeking professional mental health services or actual help-seeking behaviors. Though the mediational model was significant, the positive direction of the relation between MI stigma (IV) to communication about mental health concerns (M) was not consistent with what we had hypothesized.

Although the findings from the current ABCI sample did not support the overall moderated mediation model, as shown in Figure 2, we did observe the directions and strengths of the relation between MI stigma and communication about MHC varied as a function of ABCI's perceived MC acculturation gap. For ABCI who perceived a low acculturation gap with their immigrant parent, personal MI stigma was significantly and positively related to communication about mental health concerns. In other words, it appears that for this subgroup, the greater match on MC acculturation (perceiving a lower MC acculturation gap) may have acted as a buffer on the relation between MI stigma and MHCC. Though they may endorse higher MI stigma, their perception of a lower MC acculturation gap predicted greater openness in communicating specifically about mental health concerns with their parent. On the other hand, though not statistically significant, the strength of the correlation between MI stigma and MHCC decreased and became negative as ABCI's perceived MC acculturation gap increased, suggesting that though the acculturation gap may not be as important of a predictor for this subgroup, higher MI stigma did predict less openness in communicating about mental health concerns with their parent if a greater MC acculturation gap is perceived. There are several possible reasons for these findings, one explanation could be that a lower MC acculturation gap may be indicative of higher levels of heritage culture identification on both the parents and adult child, which traditionally have higher levels of MI stigma than mainstream American culture (Telzer et al., 2016). Additionally, as a result of the nature of the surveys (self-report and cultural identity made salient), stereotype threat may have played a role, in that it is possible that participants may have not responded as honestly or truthfully in order to protect their cultural identity, and notably, the (society's) perception of their cultural group as a whole (research on collectivistic cultures and 'saving face'; Clement et al., 2015).

Limitations

The conclusions made in the present study should be viewed in light of limitations related to issues with methodology and limitations to the present sample. First of all, results were based on data collected using only self-report measures rather than objective methods. The use of self-report measures can pose threats to research validity, as participants' responses are susceptible to inaccuracies and may not be reflective of their true behaviors, affective, or cognitive experiences because of systematic distortions (e.g., social desirability). Additionally, even if both of a participant's parents were immigrants and they reported both as primary caregivers, only one parent was used for calculating the MC acculturation gap index and MHCC. Examining the effect of parent-ABCI acculturation gap without considering the family context may yield inconclusive results, as the dynamics in each of the parent-child dyads within a family are interdependent (Minuchin, 1985; Wang, Kim, Anderson, Chen, & Yan, 2012).

Another limitation for this study is relatively small sample size and unequal sample sizes between groups, making it impossible to compare specific populations (e.g., heritage culture or 1 vs. 2 immigrant parents) on the study variables or examine whether the direction of the parent-ABCI acculturation discrepancy (i.e., positive vs. negative) has an effect on how it impacts MHCC, help-seeking attitudes, and actual help-seeking behaviors (Wang et al., 2012). Furthermore, a larger sample size would be needed to examine the unique experience of ABCI who have parents from two different cultures, either immigrant/US or immigrant-1/immigrant-2.

Asking participants to retrospectively answer the questionnaires is another issue that must be considered. Participants were asked to answer the questionnaires based on their experiences growing up with immigrant parents. It is possible that participants may have reported a distorted view of their actual experiences or had difficulty recalling their experiences during adolescence.

The age limit for participants was set to 24 in order to decrease difficulty with recall and possible memory distortions. Results from the present study were based on a sample of U.S. college students between the ages of 18-24 primarily from a specific university setting in North Texas. This poses a threat to external validity (i.e., generalizability). It may be difficult to generalize the results beyond young adults and college-attending adults from immigrant families outside the DFW area, as ABCI from immigrant families in different areas of the U.S. may have different life experiences. These limitations should be taken into account when interpreting the results of this study.

Future Research

The current study offers fruitful directions for future research. Firstly, there is a great need to establish a more consistent way of measuring acculturation and the acculturation gap. Currently, there are a number of ways that are used to measure acculturation levels and there is a lack of consistency in the instruments used to measure acculturation, making it difficult to understand findings across research studies. Thus, researchers should investigate which method provides the most comprehensive assessment of acculturation in order to inform future studies examining acculturation and acculturation gap. Future researchers should also examine acculturation differences within the same family by testing associations among mother-ABCI, father-ABCI, and mother-father, as acculturation differences in one dyad may best be understood in the context of the entire family unit (Costigan, 2010; Telzer, Yuen, Gonzalez, & Fulgini, 2016). Qualitative research approaches may be employed as they may offer a deeper understanding of ABCI's unique experiences and would be able to inform current acculturation gap theories and measurements.

Future research should focus on recruiting a more diverse sample in regards to age, gender, geographic location, ethnicity, and immigrant parent(s) heritage culture. Previous studies have suggested that ABCI that identify with European heritage culture backgrounds and have European immigrant parent(s) tend to experience less stress and maladjustment related to the acculturation experience in comparison to other ethnic groups (Yeh & Inose, 2004). It may be that European immigrants are better able to blend into American society and more likely to endorse values similar to mainstream American culture (i.e., individualistic cultural orientation). On the other hand, non-European immigrants are more likely to be visible minorities and thus not only look different from the majority of Americans, but also practice different traditions and endorse different cultural values (i.e., collectivistic cultural orientation). It seems reasonable to say that non-European immigrants and ABCI may experience heightened and more frequent value conflict between their heritage and mainstream culture than European immigrants and ABCI (Bajwa, 2010).

As we are living in the era of globalization and global migration, there is an increasing need to consider not only the experiences of immigrants, but also those of successive generations, like ABCI (Portes & Zhou, 1993). However, this is difficult because of the complex and often conflicting dynamics between experience and identity for ABCI. These are important considerations for researchers interested in cross-cultural variations in interpersonal patterns, the acculturation process, and the mental health implications for ABCI. The results of the present study emphasize the need for research to continue in the area of acculturation gap, willingness to communicate mental health concerns with parents, and help-seeking attitudes and behaviors of ABCI.

Implications

Results from this study bring to light several implications for clinicians working with young adult ABCI, specifically college students. The present findings indicate that the mainstream culture acculturation gap is important to consider among ABCI when examining the influence of mental illness stigma on willingness to communicate about mental health concerns with immigrant parents, and subsequent professional help-seeking attitudes. At the individual level, it may be beneficial for mental health professionals who have ABCI clients to consider, for example, supporting them in developing additional strategies to cope with, and counter, negative help-seeking attitudes and internalized mental illness stigma. Furthermore, the finding that mainstream culture acculturation gap is associated with willingness to communicate about mental health concerns highlights that feeling culturally connected to one's parents can result in more open communication about mental health concerns (should they arise), and subsequently, more positive help-seeking attitudes. It may be beneficial for counselors working with ABCI to obtain more information on whether or not they perceived that they shared similar cultural values with their parents growing up and how willing they were/would be to communicate mental health concerns with their parents.

Given that mental illness stigma is not the only factor compromising negative help seeking attitudes, college counseling centers may be a valuable resource for ABCI and may consider coordinating support groups and outreach programs that embed stigma-reducing strategies and encourage communication about mental health concerns psychoeducation.

Conclusion

The results obtained from this study highlight the complex relation between mental illness stigma, mainstream culture acculturation gap, communication about mental health concerns, and help seeking attitudes and behaviors for young adult ABCIs. The findings that willingness to communicate about mental health concerns with immigrant parents mediates the relation between mental illness stigma and professional help-seeking attitudes and that MC acculturation gap moderates the link between mental illness stigma and communication about mental health concerns will help inform future psychological research and practice with young adult ABCI.

APPENDIX
DEMOGRAPHIC ITEMS

1. What is your age? _____ years old.
2. What is your gender identity? (check only one)
 - ☐ Male ☐ Female
 - ☐ Transgender ☐ Questioning or unsure
 - ☐ Do not identify as female, male, or transgender
 - ☐ Other (*specify*) _____
3. What is your sexual orientation? (check only one)
 - ☐ Heterosexual ☐ Gay
 - ☐ Lesbian ☐ Bisexual
 - ☐ Asexual ☐ Queer
 - ☐ Prefer not to share ☐ Pansexual _____
 - ☐ Questioning or unsure ☐ Other (*specify*) _____
4. How do you describe yourself? (Check the one that best describes you)
 - ☐ White American ☐ Black/African American
 - ☐ Hispanic/Latino American ☐ American Indian or Alaska Native
 - ☐ Asian/Asian American or Pacific Islander
 - ☐ Middle Eastern ☐ International student, from _____
 - ☐ Prefer not to share
 - ☐ Biracial/Multiracial (*specify*) _____
 - ☐ Other (*specify*) _____
5. Your current romantic relationship status:
 - ☐ Never been in a relationship
 - ☐ Been in a committed relationship but currently not
 - ☐ Currently in a committed relationship (not married) (*specify length of current relationship*) _____
 - ☐ Currently in a marital relationship (married) (*specify length*) _____
 - ☐ Other (*specify*) _____
6. Your parents' marriage status
 - ☐ Married ☐ Separated
 - ☐ Divorced ☐ Widowed
 - ☐ Other (*specify*) _____
7. Which best describes the social-economic status of your family of origin when you grew up?
 - ☐ Upper class ☐ Upper-middle class ☐ Middle class
 - ☐ Lower middle class ☐ Lower / welfare class
8. What was(were) the primary language(s) spoken at home during your childhood?

9. Who was your primary caregiver when you grew up (e.g., mom, dad, grandmother, etc.; may list multiple persons if that is the case)? _____

10. Which of the following statement best describe you? Please check only one.

- ☐ You were born and grew up outside of the US (you were ____ y-o when moving to the US)
- ☐ You were born in the US OR you moved to the US before the age of 5, but both of your parents were born and grew up in another country
- ☐ You were born and grew up in the US and one of your parents was born & grew up in other countries
- ☐ You were born in the US, both parents were born and grew up in the US

If at least one of your parents was born & grew up outside of the US, what are their countries of origin? (skip this item if not applicable)

Dad: _____ Mom: _____

11. What is the highest level of education of your parents? (Place an “M” for Mother and “F” for Father)

- | | |
|---|--|
| <input type="checkbox"/> some high school | <input type="checkbox"/> high school graduate |
| <input type="checkbox"/> some college | <input type="checkbox"/> trade/technical/vocational training |
| <input type="checkbox"/> college graduate | <input type="checkbox"/> some postgraduate work |
| <input type="checkbox"/> post graduate degree | <input type="checkbox"/> Prefer not to answer |

12. What is your current living arrangement (check only one)?

- ☐ UNT dorm
- ☐ near/off campus apartment
- ☐ staying at home with my family
- ☐ staying at a relative's house
- ☐ other; specify: _____

13. Do you consider yourself to be a religious or spiritual person?

- ☐ Yes
- ☐ No; if no, do you consider yourself an ☐ Agnostic or ☐ Atheist?
- ☐ Decline to answer

14. If “YES” to item #13, what is your religious affiliation?

- | | | |
|---|--|------------------------------|
| <input type="radio"/> Jewish | <input type="radio"/> Buddhist | <input type="radio"/> Taoist |
| <input type="radio"/> Baptist | <input type="radio"/> Catholic | <input type="radio"/> Mormon |
| <input type="radio"/> Christian | <input type="radio"/> Episcopalian | <input type="radio"/> Muslim |
| <input type="radio"/> Lutheran | <input type="radio"/> Presbyterian | <input type="radio"/> Hindu |
| <input type="radio"/> Prefer not to share | <input type="radio"/> Other (<i>specify</i>) _____ | |

15. Are you a college student? ☐ Yes ☐ No; if yes, what is your current school standing?

- | | | |
|--------------------------------|-------------------------------------|--|
| <input type="radio"/> Freshman | <input type="radio"/> Sophomore | <input type="radio"/> Junior |
| <input type="radio"/> Senior | <input type="radio"/> post-bachelor | <input type="radio"/> non-Other (<i>specify</i>) _____ |

16. If you are not currently a college student, what is your education level (only check one)?

- | | | |
|--|---|--------------------------------------|
| <input type="radio"/> did not complete High School | <input type="radio"/> High School | <input type="radio"/> Junior College |
| <input type="radio"/> College | <input type="radio"/> Graduate or Professional Degree | <input type="radio"/> Other _____ |

17. What is your major (check all that apply)?

- | | |
|---|--|
| <input type="checkbox"/> Psychology | <input type="checkbox"/> Engineering |
| <input type="checkbox"/> Accounting | <input type="checkbox"/> Computer Sciences |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Communications |
| <input type="checkbox"/> Physical Sciences | <input type="checkbox"/> Integrative Studies |
| <input type="checkbox"/> Humanities | <input type="checkbox"/> Education |
| <input type="checkbox"/> Health Sciences | <input type="checkbox"/> Business |
| <input type="checkbox"/> Other (<i>specify</i>) _____ | |

REFERENCES

- Abdullah, T., & Brown, T. L. (2011). Mental illness stigma and ethnocultural beliefs, values, and norms: An integrative review. *Clinical Psychology Review, 31*(6), 934–948. doi: 10.1016/j.cpr.2011.05.003
- Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N., Sue, S., Spencer, M. S., ... Alegría, M. (2007). Use of mental health-related services among immigrant and US-born Asian Americans: Results from the National Latino and Asian American Study. *American Journal of Public Health, 97*(1), 91–98. doi: 10.2105/AJPH.2006.098541
- Asvat, Y., & Malcarne, V. L. (2008). Acculturation and depressive symptoms in Muslim university students: Personal–family acculturation match. *International Journal of Psychology, 43*(2), 114–124. doi: 10.1080/00207590601126668
- Bajwa, J. (2010). *The relationship between acculturation gap and adjustment: Exploring the mediating effects of perceived rejection, value conflict, and communication*. Lakehead University.
- Barnes, H. L., & Olson, D. H. (1985). Parent–adolescent communication and the Circumplex Model. *Child Development, 56*(2), 438–447. doi: 10.2307/1129732
- Baron, R. M., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. doi: 10.1037/0022-3514.51.6.1173
- Berg, J. H., & Derlega, V. J. (1987). Responsiveness and self-disclosure. *Perspectives in Social Psychology, 21*, 357. doi: 10.1007/978-1-4899-3523-6_6
- Berry, J. W. (2001). A psychology of immigration. *Journal of Social Issues, 57*(3), 615–631. doi: 10.1111/0022-4537.00231
- Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp. 9–25). Boulder, CO: Westview.
- Berry, J. W. (2003). Conceptual approaches to acculturation. In K. Chun, P. Balls-Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement and applied research* (pp. 17–37). Washington, DC: APA Press.
- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: acculturation, identity, and adaptation. *Applied Psychology: An International Review, 55*(3), 303–332.
- Biernat, M., & Dovidio, J. F. (2000). Stigma and stereotypes. In T. F. Heatherton, R. E. Kleck, M. R. Hebl, & J. G. Hull (Eds.), *The social psychology of stigma* (pp. 88–125). New York: Guilford.

- Birman, D. (2006). Acculturation gap and family adjustment. *Journal of Cross-Cultural Psychology*, 37(5), 568-589. doi: 10.1177/0022022106290479
- Birman, D., Simon, C., Chan, W., & Tran, N. (2014). A life domains perspective on acculturation and psychological adjustment: A study of refugees from the former Soviet Union. *American Journal of Community Psychology*, 53(1), 60-72. doi: 10.1007/s10464-013-9614-2
- Bulut, E., & Gayman, M. (2016). Acculturation and self-rated mental health among Latino and Asian immigrants in the united states: A latent class analysis. *Journal of Immigrant and Minority Health*, 18(4), 836-849. doi: 10.1007/s10903-015-0258-1
- Cheon, B. K., & Chiao, J. Y. (2012). Cultural variation in implicit mental illness stigma. *Journal of Cross-Cultural Psychology*. doi: 10.1177/0022022112455457
- Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., ... Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine*, 45, 11-27.
- Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, 15(2), 37–70. doi: 10.1177/1529100614531398
- Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*. doi: 10.1037/0003-066X.59.7.614
- Corrigan, P. (2016). Lessons learned from unintended consequences about erasing the stigma of mental illness. *World Psychiatry*, 15(1), 67–73.
- Corrigan, P. W., Watson, A. C., & Miller, F. E. (2006). Blame, shame, and contamination: The impact of mental illness and drug dependence stigma on family members. *Journal of Family Psychology*, 20(2), 239–246. doi: 10.1037/0893-3200.20.2.239
- Costigan, C. L., & Dokis, D. P. (2006). Relations between parent-child acculturation differences and adjustment within immigrant Chinese families. *Child Development*, 77(5), 1252–1267. doi: 10.1111/j.1467-8624.2006.00932
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review*, 66(5), 522–541. doi: 10.1177/1077558709335173
- Dinh, K. T., & Nguyen, H. H. (2006). The effects of acculturative variables on Asian American parent–child relationships. *Journal of Social and Personal Relationships*, 23(3), 407-426. doi: 10.1177/0265407506064207

- Farver, J. A. M., Narang, S. K., & Bhadha, B. R. (2002). East meets West: Ethnic identity, acculturation, and conflict in Asian Indian families. *Journal of Family Psychology, 16*(3), 338–350. doi: 10.1037//0893-3200.16.3.338
- Fujimoto, K. A., & Hwang, W.-C. (2014). Acculturative family distancing: Psychometric analysis with the extended two-tier item response theory. *Psychological Assessment, 26*(2), 493–512. doi:10.1037/a0035757
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New York: Simon & Schuster.
- Goforth, A. N., Pham, A. V., & Oka, E. R. (2015). Parent–child conflict, acculturation gap, acculturative stress, and behavior problems in Arab American adolescents. *Journal of Cross-Cultural Psychology, 46*(6), 821–836. <http://doi.org/10.1177/0022022115585140>
- Grotevant, H. D., & Cooper, C. R. (1985). Patterns of interaction in family relationships and the development of identity exploration in adolescence. *Child Development, 56*(2), 415–428.
- Hair, J. F. (2010). *Multivariate data analysis: A global perspective*. Pearson Education.
- Han, M., & Pong, H. (2015). Mental health help-seeking behaviors among Asian American community college students: The effect of stigma, cultural barriers, and acculturation. *Journal of College Student Development, 56*(1), 1-14. doi: 10.1353/csd.2015.0001
- Hartos, J. L., & Power, T. G. (2000). Association between mother and adolescent reports for assessing relations between parent–adolescent communication and adolescent adjustment. *Journal of Youth and Adolescence, 29*(4), 441–450. doi: 10.1023/A:1005158425861
- Hay, E. L., Fingerman, K. L., & Lefkowitz, E. S. (2007). The experience of worry in parent-adult child relationships. *Personal Relationships, 14*(4), 605–622. doi:10.1111/j.1475-6811.2007.00174
- Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. *White Paper*. doi:978-1-60918-230-4.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York, NY: Guilford.
- Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental illness stigma, help seeking, and public health programs. *American Journal of Public Health, 103*(5), 777-780. doi:10.2105/AJPH.2012.301056
- Huynh, Q.-L., Howell, R. T., & Benet-Martínez, V. (2009). Reliability of Bidimensional Acculturation Scores. *Journal of Cross-Cultural Psychology, 40*(2), 256–274. doi: 10.1177/0022022108328919

- Hwang, W.-C. (2006). Acculturative family distancing: Theory, research, and clinical practice. *Psychotherapy: Theory, Research, Practice, Training*, 43(4), 397–409. doi: 10.1037/0033-3204.43.4.397
- Hwang, W.-C., & Ting, J. Y. (2008). Disaggregating the effects of acculturation and acculturative stress on the mental health of Asian Americans. *Cultural Diversity and Ethnic Minority Psychology*, 14(2), 147–154. doi: 10.1037/1099-9809.14.2.147
- Hwang, W.-C., Wood, J. J., & Fujimoto, K. (2010). Acculturative family distancing (AFD) and depression in Chinese American families. *Journal of Consulting and Clinical Psychology*, 78(5), 655–667. doi: 10.1037/a0020542
- Kang, S.-M. (2006). Measurement of acculturation, scale formats, and language competence: Their implications for adjustment. *Journal of Cross-Cultural Psychology*, 37(6), 669–693. doi: [10.1177/0022022106292077](https://doi.org/10.1177/0022022106292077)
- Kessler, R. C., Berglund, P. A., Bruce, M. L., Koch, J. R., Laska, E. M., Leaf, P. J., ... Wang, P. S. (2001). The prevalence and correlates of untreated serious mental illness. *Health Services Research*, 36(1), 987–1007. doi: 10.1176/appi.ps.54.9.1253
- Kessler, R. C., Demler, O., Richard G. Frank, Olfson, M., Pincus, H. A., Walters, E. E., ... Zaslavsky, A. M. (2005). Prevalence and treatment of mental disorders, 1990 to 2003. *The New England Journal of Medicine*, 352(24), 2515–2523.
- Kim, S. Y. (2003). Acculturation, parenting, and adolescent adjustment in Chinese American families. Presented at the Summer Institute of the Family Research Consortium. Albuquerque, NM.
- Koerner, F. A., & Fitzpatrick, M. A. (2002). Understanding family communication patterns and family functioning: The roles of conversation orientation and conformity orientation. *Annals of the International Communication Association*, 26(1), 36–65. doi: 10.1080/23808985.2002.11679010
- Lally, J., O’Conghaile, A., Quigley, S., Bainbridge, E., & McDonald, C. (2013). Stigma of mental illness and help-seeking intention in university students. *The Psychiatrist*, 37(8), 253–260.
- Lam, C. S., Tsang, H., Chan, F., & Corrigan, P. W. (2006). Chinese and American perspectives on stigma. *Rehabilitation Education*, 20(4), 269–279.
- Lauber, C., & Rössler, W. (2007). Stigma towards people with mental illness in developing countries in Asia. *International Review of Psychiatry*, 19(2), 157–178. doi: 10.1080/09540260701278903
- Lawton, K., & Gerdes, A. (2014). Acculturation and Latino adolescent mental health: Integration of individual, environmental, and family influences. *Clinical Child and Family Psychology Review*, 17(4), 385–398. doi: 10.1007/s10567-014-0168-0

- Leaf, P. J., Bruce, M. L., Tischler, G. L., & Holzer, C. E. (1987). The relationship between demographic factors and attitudes toward mental health services. *Journal of Community Psychology*, 15(2), 275–284. doi: 10.1002/1520-6629
- Link, B. G., Struening, E. L., Rahav, M., Phelan, J. C., & Nuttbrock, L. (1997). On stigma and its consequences: Evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *Journal of Health and Social Behavior*, 38(2), 177–190. doi: 10.2307/2955424
- Link, B. G., Cullen, F. T., Struening, E. L., Shrout, P. E., & et al. (1989). A modified labeling theory approach to mental disorders: An empirical assessment. *American Sociological Review*, 54(3), 400–423. doi: 10.2307/2095613
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27, 363–385.
- Link, B. G., Yang, L. H., Phelan, J. C., & Collins, P. Y. (2004). Measuring mental illness stigma. *Schizophrenia Bulletin*, 30(3), 511–541. doi: 10.1093/oxfordjournals.schbul.a007098
- Link, B. G. (1987). Understanding labeling effects in the area of mental disorders: An assessment of the effects of expectations of rejection. *American Sociological Review*, 52(1), 96. doi: 10.2307/2095395
- Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). Stigma as a barrier to recovery: The consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services*, 52(12), 1621–1626. doi: 10.1176/appi.ps.52.12.1621
- Lorenzo-Blanco, E. I., Schwartz, S. J., Unger, J. B., Romero, A. J., Cano, M. Á., Baezconde-Garbanati, L., ... Pattarroyo, M. (2016). A process-oriented analysis of parent acculturation, parent socio-cultural stress, family processes, and Latina/o youth smoking and depressive symptoms. *International Journal of Intercultural Relations*, 52, 60–71. doi: 10.1016/j.ijintrel.2016.04.001
- Merali, N. (2002). Perceived versus actual parent-adolescent assimilation disparity among Hispanic refugee families. *International Journal for the Advancement of Counselling*, 24(1), 57–68. doi: 10.1023/a:1015081309426
- Migration Policy Institute. (2015). Children in U.S. Immigrant Families: American Community Survey (ACS). Retrieved from <http://www.migrationpolicy.org/>.
- Phelan, J. C., Bromet, E. J., & Link, B. Q. (1998). Psychiatric illness and family stigma. *Schizophrenia Bulletin*, 24(1), 115–126. doi: 10.1093/oxfordjournals.schbul.a033304
- Phinney, J. S., & Ong, A. D. (2002). Adolescent-parent disagreements and life satisfaction in families from Vietnamese- and European-American backgrounds. *International Journal of Behavioral Development*, 26(6), 556–561. doi: 10.1080/01650250143000544

- Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *The Annals of the American Academy of Political and Social Science*, 530, 74-96.
- Rhee, S., Chang, J., & Rhee, J. (2003). Acculturation, communication patterns, and self-esteem among Asian and Caucasian American adolescents. *Adolescence*, 38(152), 749-768.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79(1), 49-65. doi: 10.1037//0022-3514.79.1.49
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, 57(1), 1-10. doi: 10.1037/a0018082
- Schwartz, S. J., Kim, S. Y., Whitbourne, S. K., Zamboanga, B. L., Weisskirch, R. S., Forthun, L. F., . . . Luyckx, K. (2013). Converging identities: Dimensions of acculturation and personal identity status among immigrant college students. *Cultural Diversity & Ethnic Minority Psychology*, 19(2), 155-165. doi: 10.1037/a0030753
- Schwartz, S. J., Waterman, A. S., Umaña-Taylor, A. J., Lee, R. M., Kim, S. Y., Vazsonyi, A. T., . . . Williams, M. K. (2013). Acculturation and well-being among college students from immigrant families. *Journal of Clinical Psychology*, 69(4), 298-318. doi: 10.1002/jclp.21847
- Smart, L., & Wegner, D. M. (1999). Covering up what can't be seen: Concealable stigma and mental control. *Journal of Personality and Social Psychology*, 77(3), 474-486. doi: 10.1037/0022-3514.77.3.474
- Soheilian, S. S., & Inman, A. G. (2009). Middle Eastern Americans: The effects of stigma on attitudes toward counseling. *Journal of Muslim Mental Health*, 4(2), 139-158. doi: 10.1080/15564900903245766
- Sue, D. W. (1990). Culture-specific strategies in counseling: A conceptual framework. *Professional Psychology: Research and Practice*, 21(6), 424-433. doi: 10.1037/0735-7028.21.6.424
- Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An Initial Report. *Educational and Psychological Measurement*, 47(2), 401-407. doi: 10.1177/0013164487472012
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Pearson/Allyn & Bacon. Retrieved from <http://www.worldcat.org/title/using-multivariate-statistics/oclc/62766132>
- Tata, S. P., & Leong, F. T. L. (1994). Individualism-collectivism, social-network orientation, and acculturation as predictors of attitudes toward seeking professional psychological help

- among Chinese Americans. *Journal of Counseling Psychology*, 41(3), 280–287. doi:10.1037/0022-0167.41.3.280
- Telzer, E. H. (2010). Expanding the acculturation gap-distress model: An integrative review of research. *Human Development*, 53(6), 313–340. doi: 10.1159/000322476
- Telzer, E., Yuen, C., Gonzales, N., & Fuligni, A. (2016). Filling gaps in the acculturation gap-distress model: Heritage cultural maintenance and adjustment in Mexican–American families. *Journal of Youth and Adolescence*, 45(7), 1412–1425. doi: 10.1007/s10964-015-0408-8
- Ting, J. Y., & Hwang, W. (2009). Cultural influences on help-seeking attitudes in Asian American students. *American Journal of Orthopsychiatry*, 79(1), 125–132. doi: 10.1037/a0015394
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.
- Vogel, D. L., Armstrong, P. I., Tsai, P.-C., Wade, N. G., Hammer, J. H., Efstathiou, G., ... Topkaya, N. (2013). Cross-cultural validity of the Self-Stigma of Seeking Help (SSOSH) scale: examination across six nations. *Journal of Counseling Psychology*, 60(2), 303–310. doi: 10.1037/a0032055
- Vogel, D. L., Heimerdinger-Edwards, S. R., Hammer, J. H., & Hubbard, A. (2011). “Boys don’t cry”: Examination of the links between endorsement of masculine norms, self-stigma, and help-seeking attitudes for men from diverse backgrounds. *Journal of Counseling Psychology*, 58(3), 368–382. doi: 10.1037/a0023688
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, 53(3), 325–337. doi: 10.1037/0022-0167.53.3.325
- Wang, P. S., Berglund, P., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Failure and delay in initial treatment contact after first onset of mental disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 603–613. doi: 10.1001/archpsyc.62.6.603
- Wang, Y., Kim, S. Y., Anderson, E. R., Chen, A. C., & Yan, N. (2012). Parent-child acculturation discrepancy, perceived parental knowledge, peer deviance, and adolescent delinquency in Chinese immigrant families. *Journal of Youth and Adolescence*, 41(7), 907–919. doi: 10.1007/s10964-011-9705-z
- Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 629–640. doi: 10.1001/archpsyc.62.6.629

- Yeh, C. J. (2003). Age, acculturation, cultural adjustment, and mental health symptoms of Chinese, Korean, and Japanese immigrant youths. *Cultural Diversity and Ethnic Minority Psychology*, 9(1), 34–38. doi:10.1037/1099-9809.9.1.34
- Yeh, C., & Inose, M. (2002). Difficulties and coping strategies of Chinese, Japanese, and Korean immigrant students. *Adolescence*, 37(145), 68–82.
- Zhang, N., & Dixon, D. (2003). Acculturation and attitudes of Asian international students toward seeking psychological help. *Journal of Multicultural Counseling and Development*, 31, 205–222. doi: 10.1002/j.2161-1912.2003